DETAILED PLAN OF STUDY

OF

SAN FRANCISCO BAY AREA IN-DEPTH STUDY

APPENDIX B

PUBLIC HEARING STATEMENTS, COORDINATION ACTIVITIES AND COMMENTS FROM OTHERS

MARCH 1971

U.S. ARMY ENGINEER DISTRICT, SAN FRANCISCO
CORPS OF ENGINEERS
SAN FRANCISCO, CALIFORNIA

DETAILED PLAN OF STUDY
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COORDINATION ACTIVITIES AND
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PART I

PUBLIC HEARING

STATEMENTS

PUBLIC HEARING: OAKLAND

2 JUNE 1970

Statement of Raymond Walsh, Director, San Francisco-Delta Water Quality Control Program, California State Water Resources Control Board

...The State Water Resources Control Board is pleased to participate in this hearing, to present its recommendations concerning matters of mutual interest and concern, and to urge the Corps of Engineers to proceed with this important work which has been authorized by the resolution transmitted with the Notice of Public Hearing. In my presentation I will outline the salient features of the Bay-Delta Water Quality Control Program and speak directly to those items which you seek information and data.

Public concern with present and potential water quality problems in San Francisco Bay and the Sacramento-San Joaquin Delta results in the authorization and funding by the State Legislature in 1965 of a comprehensive water quality investigation identified as the San Francisco Bay-Delta Water Quality Control Program. Kaiser Engineers, together with a group of associated firms, was selected as a master contractor for these studies. Appropriate State agencies participated as well. In addition, a Board of Consultants, composed of distinguished experts from several disciplines, was retained to advise the State Board throughout the course of the detailed planning studies.

Last year Kaiser Engineers completed and made available the final report resulting from their study of water control problems in the Bay and Delta areas. The Board of Consultants submitted a report also to

the State Board.

If I may now, in very general terms, describe the legislative objectives of that program and its findings. The major objectives were, in numbered order, here:

1. To determine the present and potential future effects of wastewater and drainage discharges into the waters of the Bay and Delta.

2. To determine the need for and the feasibility of a comprehensive multi-purpose wastewater collection, treatment, reclamation, and disposal system serving the entire area, as well as other measures for maintenance of the quality of waters.

3. To develop the basic features of a comprehensive long-range plan for control of water pollution.

And the findings relative to these three points:

1. Significant deterioration of water quality has already occurred in Bay and Delta waters. Toxic and biostimulant components of municipal and industrial wastewaters have been identified as the principal causes of this deterioration. In addition, oxygen-demanding substances, bacteria, settleable solids, and floatable materials impair the desired beneficial water uses. The inescapable increase in these municipal and industrial wastewater discharges during the next 50 years will result in progressive damage to the aquatic environment unless more effective measures are implemented.

2. There are in excess of 150 municipalities and 70 industries which now separately discharge their treated wastewater to Bay-Delta receiving waters. The highest concentrations of pollutants occur at the extremities of the estuary where diluting capability resulting from dispersion by tidal action is least.

   The upgrading of wastewater treatment to include costly tertiary levels at the many present discharge sites will not protect with certainty all the desired beneficial uses of the aquatic environment. Only a coordinated regional system can provide for the transport of treated wastewater to areas of the estuary near its outlet to the sea where unused waste receiving capacity still exists. In the future, discharge of treated flows directly to the ocean may be required. There is urgent need for a regional plan and a system of facilities for treatment, reclamation, and discharge of municipal and industrial wastewaters to locations which afford adequate and effective dispersion.

A comprehensive regional wastewater collection and disposal system for the nine Bay Area counties is feasible and offers greater protection to the environment than would a continuation of the present fragmented approach.

3. The basic features of a comprehensive plan for the control of water pollution are presented in the Kaiser report. Although it is recognized that specific details of location, sizing, and staging of construction of the recommended physical facilities must be subject to further planning and feasibility studies by an ensuing agency, these basic features include:

   a. A regional system, constructed in stages, which initially would transport and dispose of treated municipal and industrial wastewaters from the extremities of the estuary to locations near the Central Bay where receiving waters are exchanged more rapidly with the ocean.

   b. A regional sewerage service agency (single or multiple-purpose) which would have authority to plan, finance, construct and operate facilities for treatment, reclamation, and disposal of municipal and industrial wastewaters.

   c. Source control of those persistent pesticides which are not controllable in any other way.

   d. A continuing program of studies and investigations needed to guide further detailed regional planning.

The State Water Resources Control Board is now proceeding with refinement of these basic features through development of cooperative subregional studies relating to treatment, reclamation and disposal of municipal and industrial wastewater in those areas of the Bay that have been identified as having problems requiring near-term solution. It is recommended that the Corps of Engineers be guided by Bay-Delta Program concepts when considering municipal and industrial development resulting from proposed vessel and port enhancement projects.

It is most certainly recognized that the further development of waterborne commerce through harbor improvement would have a direct effect

upon the future location of both people and industries that generate municipal and industrial waste loads. The basic concepts of the Bay-Delta program recognize growth and development. They also provide sufficient flexibility to accommodate time and space changes not specifically detailed in the growth projections that have been made.

The State Water Resources Control Board would respectfully request that it be apprised of new and augmented plans for harbor improvement so that they can be taken into consideration in the updating of both near-term and long-range plans for dealing with municipal and industrial wastewaters.

Development of additional vessel and port facilities and the resultant increase in waterborne commerce involves a number of possible ecological effects and environmental factors, most of which are in some way related to water quality. Examples (not necessarily a complete listing) of such potential effects and factors which the San Francisco Bay Area In-Depth Study may wish to consider are:

1. Dredging for increased channel and berthing area depth and for maintenance of desired depths:

    a. Turbidity resulting from dredging.

    b. Fate of sediments re-suspended during dredging.

    c. Dredgings disposal.

    d. Excavation into confined freshwater aquifers.

    e. Interference with migration and spawning of fish.

    f. Obliteration of benthic communities.

2. Deeper water channels:

    a. Sea water incursion into freshwater areas of Delta

b. Changed receiving water conditions in general vicinity of wastewater discharges, i.e., Stockton.

c. Changed water velocity and current patterns.

3. Increased navigation:

a. Increased sewage discharges from vessels.

b. Increased opportunity for spills or accidental discharges from vessels during loading and unloading, bunkering, and lightering.

The State Water Resources Control Board offers its support and assistance in the conduct of the San Francisco Bay Area In-Depth Study...

Statement of Henry J. Ongerth, Chief, Bureau of Sanitary Engineering, California State Department of Health

...As reported to your predecessor. Colonel Frank C. Boerger, in our communication of March 25, 1969, the California State Department, as well as local and Federal health agencies, have broad interests and responsibilities in the water quality of the San Francisco Bay Area and Delta. These agencies are particularly concerned with domestic water supply at Antioch, Mallard Slough, and other points upstream in the Delta; shellfish, both sports and potential commercial; recreation, including boating, fishing, and water sports; and sanitation in marinas.

Many programs and planning activities at all levels of government are being conducted or developed throughout the Bay system without comprehensive information on existing conditions in the Bay and Delta areas. Of specific interest to health authorities is the bacteriological quality of the waters in question, particularly those waters which are (or may be) used for domestic water supply, recreation, or shellfish cultivation. Other authorities have other areas of interest, but there is a general paucity of current data on which to make evaluations and base decisions.

Many studies have been conducted to develop information at one particular time or place, however, the data rapidly became obsolete with changing conditions.

There is need for a flexible data gathering program, perhaps commencing as a bacteriological program and extending when the demand arises to include other factors. Such a program would increase efficiency of water quality related activities at all levels of government,

fill areas where data is needed but not available under present programs, reduce overlap on data collection, and provide current information on water quality.

The objective of the proposed program would be to develop and institute a multi-purpose data gathering operation which would provide information whereby current waste discharges, human and natural activities and other factors can be related to water quality...

Statement of Herbert G. Crowle, Director of Public Works in Alameda County.

...There is a very serious matter which affects flood control and all waterborne commerce. That is the matter of silt and debris in the Bay and its tributaries.

Alameda County is experiencing excessive silt deposits in the flood control channels which carry storm water runoff into the Bay. Subject to budgetary limitations and restrictions placed by regional agencies, we are removing silt from the channels in order to maintain adequate flood capacity. However, considerable amounts of silt do enter the Bay from all the many tributaries.

It is believed that your In-Depth Study should include the subject of long-range watershed erosion control and silt and debris removal from shipping channels, flood control channels, and other tributary channels. It may be possible that cooperative agreements could be worked out between the Corps of Engineers and each local agency responsible for flood control activities. The removal and disposal of silt and debris entering the Bay is a problem requiring both long-range planning and the complete cooperation of all local agencies surrounding the Bay.

Another extremely important matter is that of enhancing the ecological and environmental aspects of the Bay. There are many old piers, piling structures, tires and other unsightly and sometimes hazardous debris lying about in the Bay and the lower reaches of the sloughs and rivers. The Corps of Engineers could serve a tremendously important service that would demonstrate clearly a positive and effective approach to the improvement of the environment by including in the proposed

comprehensive plan of improvement an initial and annual program of cleaning up the Bay, the mudflats, the sloughs, rivers and creeks. Such a program would have a most beneficial effect on public morale and particularly that of our youth. It is strongly recommended that you include this feature in your study and plan of improvement.

Statement of Walter A. Abernathy, Asst. Executive Director, Port of Oakland.

...This proposed study extends the Corps beyond its traditional navigational role into areas which have formerly been under the planning purview of local interests by including such diverse elements as establishing guidelines for regional developments for maritime commerce and recommendations for improvements in harbor and industrial operations through improved coordination and programming, including solicitation, market research, public relations, advertising and long-term planning.

In the past, the harbor complexes of this country have developed through an informal but effective partnership between local and Federal governments. Local agencies, such as the Port of Oakland, relying on local financing, have for the most part developed the great port facilities of this country. The Federal government has taken on the important and heavy financial responsibility of providing and maintaining the deep-water shipping channels that serve these locally constructed and controlled port facilities. We believe this arrangement has made sense and adequately served the maritime needs of this country.

The economy of cities such as Oakland is dependent in large measure upon their port facilities. We have estimated that the benefits to this community from the Port of Oakland operations alone exceed $200 million annually in wages, taxes, construction, purchase of supplies and materials, etc., and that 20% of the jobs in Oakland are supported by Port enterprises. Since the city's economic destiny depends largely on its port, local interests naturally wish to exercise close control over its operation and development.

In Oakland, we believe we have done an excellent job of providing facilities for maritime commerce. As most of you know, the waterfronts of the world are being reshaped by recent innovations in cargo handling techniques primarily caused by the advent of containerization. In a matter of just a few years, methods of handling cargo have changed dramatically, affecting trade routes and the physical harbor facilities. In less than five years we have had not only to anticipate and plan for these changes, but we have financed, constructed and completed modern ma marine terminals to serve the changing and growing requirements of this trade.

Through our own research, as well as independent studies, we have attempted to logically anticipate the needs of containerization. In 1966 we retained an independent consulting firm to estimate the volume of tonnage that we could expect in Oakland in 1980. That consultant predicted that by 1980 the Port would handle one million tons of containerized cargo. Actually, in 1969 we had over three million tons of containerized cargo, exceeding the 1980 estimate and eleven years ahead of schedule.

It is difficult for any long-range planning exercise to accurately predict the implications of technological advances. The problem here is compounded by the fluidity of international trade with nations and commodities introducing an overwhelming combination of variables which practically defy the possibility of accurate long-range projections. For example, the 50-year forecast for Oakland Harbor tonnage prepared in 1959 by the Corps estimated that general cargo in the foreign and coastwise trades would increase from the 1957 level of 1,943,000 tons at a rate

of approximately 40,000 tons annually to about 4,000,000 in 2010. Last year -- 41 years earlier than expected -- we handled in excess of four million tons of foreign cargo alone, exclusive of 2.3 million tons handled at the military facilities in the Oakland Harbor.

The Port of Oakland feels the pressures of a growing trade now and they cannot be ignored during the In-Depth Study. We have to act fast to provide facilities to serve the new vessels that are being planned and constructed by shipping lines throughout the world. The trade will probably continue to change dramatically during the course of this In-Depth Study which may take five years or longer to accomplish. In the most recent five-year period ending this year, the Port of Oakland will have increased its shipping capacity from 18 to 29 berths, and last year alone Oakland Harbor marine cargo rose by almost two million tons, a 54% increase over the previous year. If this study were commenced five years ago, the data developed in the early years would be totally out of date with the situation as we find it today.

Just as we are responding to the changing and expanding requirements of the trade, the Corps must likewise move quickly to improve the navigational channels serving our facilities. It is our opinion, to be most meaningful, the study should concentrate on those elements where the Corps has been traditionally involved in its harbor partnership with local interests, that is, the need for the development of the shipping channels. Our channels in the Bay area are inadequate and we suggest that this study determine an immediate and expeditious program for developing channels for the present and future requirements of maritime

commerce in the Bay Area. Local agencies, such as our port, as I have explained, have moved in a short period of time to develop new terminals, but the channels have not improved on the same accelerated schedule. The Oakland Estuary, which serves a large share of our terminal facilities, has a present depth of minus 30 feet MLLW, which was authorized by Congress in 1910. Fifteen years ago, in 1955, a Congressional authorization was received to study the advisability of deepening the Estuary channel. In 1962, Congress authorized a project to deepen the Estuary channel to 35 feet. We are hopeful but not positive that the dredging for this new depth will commence this fall. If this local-Federal partnership is to work in the future, then channel deepening projects must somehow be accomplished more expeditiously. We needed a 35 foot channel in 1955. Today we need at least 40 feet and we cannot wait another 15 years until we reach this new depth.

Shipping lines throughout the world are planning and actually constructing "Pan-Max" vessels, which is a term that refers to the maximum size vessel that can navigate the Panama Canal. These "Pan-Max" vessels will soon be calling in the Bay Area at Port of Oakland facilities. These large vessels have a draft of approximately 40 feet, are approximately 950 feet in length, and have a width of 106 feet. Sea-Land Service, for example, one of the major United States flag carriers, has under construction eight of these vessels, some of which will be assigned to the Pacific trade and call at Oakland. The Japanese lines are planning "Pan-Max" ships, and after just returning from a trade trip calling on the various steamship headquarters in Europe, we find that the European

lines are also actively planning construction of these super-sized ships. It is possible that in the next several years even larger vessels will be required, if it is determined that vessels should be dedicated exclusively to the Pacific trade, forsaking the possibility of a Panama Canal transit to the Atlantic. If this decision is made by the steamship lines, and it is a real possibility, then we could have a requirement for even deeper draft general cargo vessels calling in the Bay Area.

One of the aspects of the study is to consider the requirements for bulk carriers. The space requirements of general cargo and the close proximity of residential, commercial and industrial properties have influenced our thinking that additional tanker facilities should not be developed in Oakland. Judging from the general Bay Area Plan of the Bay Conservation and Development Commission, the Bay ports south of the Bay Bridge have not been designated for large bulk carriers such as super tankers and super bulk carriers with drafts of more than 50 feet. Consequently, for the foreseeable future,we do not expect the channel requirements for the ports south of the Bay Bridge to exceed a 50-foot depth.

It will be very difficult for the proposed study to give meaningful consideration to the requirements of tankers from the rather limited scope of the Bay Area Study. I do not believe the requirements of large bulk carriers can be considered on a meaningful basis from a regional standpoint, but, rather, a broader national view has to be taken in reviewing the problem of accommodating and providing proper safeguards for the handling of these mammoth vessels.

We wish to be as cooperative as possible with the Corps of Engineers

in undertaking this study. We have data and material which we are pleased to make available to the Government. However, we hope the emphasis and the direction of the investigation is toward the real problem, which is the inadequacy of our channels, and urge that the study not be unduly diluted by including areas which are traditionally and more properly the concern of local interests.

In summary, we suggest the study be undertaken and we hope that it be pinpointed more directly to the problem of channels. This type of concentrated study needs to be started as soon as possible and completed within a reasonable period of time, say a year and a half. A three or five year study, such as presently proposed, would be out of date before completed and would tend to inhibit maritime commerce by curtailing needed developments, including channel improvement projects, while the effort is undertaken. The preliminary plan of the study indicates that the development of the plan will in no way preclude or defer for future action the execution or completion of projects already authorized. However, this statement does not include projects that need to be authorized during the scope of the study. We do not believe the region would be well served by waiting five years for the completion of the study before we can consider and start the progress toward deepening the channels which are so obviously needed.

Statement of Captain Gar Long, President, California Inland Pilots Association.

...California Inland Pilots are deeply interested in the economic and physical development of California waterways. Fortunately, California is blessed with one of the finest natural harbors in the world, and has access to hundreds of miles of developable contributories.

This harbor and her contributories have the potential of becoming one of the world's most important industrial and transportation centers. However, development and organization must be planned now to stimulate economic growth. It is of primary importance for the operational forces to keep pace with the engineering advances.

To date, many millions have been spent for ship channels and facilities, but little thought has been given to an efficient pilot organization to service these developments and guarantee safe passage. We need only to look at the recent fully-loaded ammunition ship ramming a pier in central San Francisco and creating a near catastrophe, and before that many ship collisions costing millions in damages.

It is shocking to be faced with the fact that in this area there are six pilot groups, charging various rates, with little or no cooperation between groups. Radio communications between ships are not required, and for that matter, foreign registered vessels do not require a pilot.

The historians say the Spanish Armada was lost because of the lack of pilots. Must we wait until an ammunition ship explodes, a tanker erupts in San Francisco Bay, or the area's reputation discourages economic growth, before action is taken ?

We face the question: How can the San Francisco area operations keep pace with the Army Engineers ? We must instigate a single pilot organization to service the Bay and tributaries, under state law, to control rates and efficiency. Included must be regulation for radio communication and positive apprentice programs. Shore-based radar must be operated by pilots. Pilots most effectively can control ship pollution of the air and the water. Representative pilots should always be involved with channel and shore facilities planning.

There are many advantages to an organized pilot system. To gain these advantages, industry and government must become involved in the formulation and then unanimously support their pilot plan to see it become a state law.

Statement of Robert H. Langner, Executive Secretary, California Marine Affairs Conference

...I would like to very briefly, though, describe some of the background which I think might be relevant to the origin and authorization of this study. The organization which I represent was founded in 1956, and its area of coverage was approximately that which you have on your chart here now. Its purpose, then and now, was to represent, to coordinate and to assist the commercial shallow-draft ports in obtaining Federal authorization and funding for needed navigation improvements, and coordinating these efforts in Washington, D.C., in presentation to the Congress and to the Bureau of the Budget.

Since its founding, it has extended to cover all of California. Now we represent all of the commercial ports of the area of activity, and most of the smaller pleasure craft and harbor refuge and projects in the state. During our development period, between 1956 to 1960, it became increasingly obvious to us that the present system in Federal policy, as referred to by Mr. Abernathy, among others, of seeing projects through from study, authorization study, funding, to completion, was inadequate. He referred in his testimony to the accelerating rate of change in marine technology and of the difficulty of forecasting, and these same deficiencies appeared more strongly to us in the process by which -- particularly deep-draft channel projects -- were carried forward.

We have referred to the John F. Baldwin-Stockton ship channel as a by-product of the original Bay study. We were one of the active supporters of the San Francisco Bay Study, and its corollary barrier study, the

unique model at Sausalito, the extension to the Delta. These are indeed important research tools and efforts. The Baldwin Channel, as important as it is, is probably the most single important project of its type in California's history, would be well in excess of ten years, more likely 15 years, from its inception to its completion. This comes at a time of great change, as cited in the Marine Field and in commerce, and indeed everything we can think of, the process by which the Federal government goes about these projects, we thought, needs reexamination.

Many others in the country feel the same way. Indeed, there are national efforts underway, both Federally and by organizations, to change these procedures to meet these challenges. However, the dynamics of California, and the Bay Area particularly, we felt that the need here is even greater, and this comes at a time when the amount of funding for civil works projects in general has been diminishing, and that portion of civil works funding for navigational projects is decreasing within that context, and California's portion of those works is diminishing further.

So we sought some method to highlight, to accentuate, to provide the factual basis for such emphasis. San Francisco and Los Angeles -- San Francisco Bay, Los Angeles, San Diego, and the other ports of California, last year I understand had $8 billion in foreign commerce, exclusive of our considerable coastal domestic shipping. Indeed, it's difficult to find an area in the world which has benefitted more by waterborne commerce, and our activities here are totally dependent upon the access to the sea.

I can only add that your chart there, it seems to me, is almost too-encompassing, or not encompassing enough. We visualize this effort

as to not only take in the physical area represented there, but the economy of the northern part of California, indeed the hinterlands served by our ports and complexes here in foreign commerce. This is one of the reasons we supported and sought authorization in 1967 by Congressman Del Clawson of Crescent City, Congressman Harold T. Johnson of Roosevelt, and Congressman Waldie of Martinez, concerning the Congressional level and the Bureau of Public Works Committee.

We thought also that there is concern at the Congressional level, and in the Bureau of Budgets and the executive agencies with accelerating costs of these projects reflected, perhaps, in the diminishing funds available that the backlog of civil works projects, the amount of pressures on Congress to further deepen channels, was such that it was increasingly difficult to set priorities and determine what would be the most effective in terms of our natural economy.

We also found that there was need for data which was not available to us. Indeed, we don't know if it's available to us anywhere.

What is the impact of waterborne commerce, foreign trade specifically, on our regional economy ? Mr. Abernathy referred to the impact of the Port of Oakland on the economy here, and what a considerable and important figure it is. What is the total effect on our economy here ? How can we justify the things that should be done ? How can we use this information to justify policies by the Federal government in international affairs, and help our state to further promote demand in Congress ?

Such data is lacking. In other areas it is lacking, and as I recall, encompassed in this resolution study is the raw material developments

of our civilization. We found that the last major study, to our knowledge, done in this area was the so-called Peeley Report in 1950, under President Truman. The title, I believe, was "Resources for Freedom".

This report took the period from World War I to 1950, and we found in that very brief time of history the United States consumed more fossil fuels and metallic ores than all of mankind had in all of history. We understand our consumption has roughly doubled since 1950.

The impact of such a demand by a voracious industry and people, our population growth, has never been projected, to our knowledge, to find its way into our future needs for moving cargo by water. We also saw the collapsing time reference supplied in employment and the jump in size of ships referred to also by Mr. Abernathy. This is an area, as I mentioned, concerning Congress and the Corps of Engineers, I am sure, and the other particular agencies. What is to be the determination on channel dimensions for these vessels and what would be the justification ? What would be the safety factors ?

Captain Long referred to operational problems. We consider our region here very unique, in offering a test tube, as we have in the Bay study, the Bay Model and other activities that we have, as a test tube or prototype for possible national application. For example, we have the first harbor radar surveillance system in the United States. It's a very tentative first step. Again, using this area as a test tube. We have a unique mixture of fishing craft, pleasure boats, 50,000 or so headquartered in the area; a very major foreign commerce, 5,000 commercial ships arriving last year alone; two naval shipyards, not one but two,

including the only nuclear facility on the Pacific Coast. The arsenals on the Pacific Coast handling about 85% of the total explosives and ammunition are here on the West Coast.

I can speak with Captain Long on the dangers of this, since I was present the night Port Chicago blew up in World War II. I was on the medical team. There is, indeed, great danger. This is one of the aspects, too, which we feel, and the security aspects. These are rather broad, sweeping generalizations. I hope to amplify and go into more detail on some of these. These are among some of the motivations we had when we sought the authorization for this resolution, a resolution to be studied by the Congress.

Indeed, there are many things about it we don't understand. We know the methodology; how it's going to be done is not finally determined. Different people view this in different ways. Some would like to see some aspects accentuated, and others dropped. Others would like to see certain other things get the highest priority. Certainly it is not going to be an easy assignment for the Corps of Engineers. It certainly wouldn't be for any Federal agency.

We think that the input here that is possible, just as the Bay study, the Bay Area Report, the Demographic 20-20 Report as to the future population, the Triple S Study you mentioned, all of these have a great impact on us. They have determined much of our planning, much of our thinking about our resources here, our Bay, our Bay system, the balance between environment, ecology resources, navigation, marine security. All these mixtures have to be considered. We hope that out of all of

this would come sufficient information for justification of perhaps changing the rules of the game as to how these projects are approached, the speed, certainly, as Mr. Abernathy mentioned, at which the Federal government can move to take the necessary steps as a constitutional responsibility to improve navigation.

These are some of the things we see in this. We stand, as we have in the past, with our cooperation, that of our members, as many of them have indicated, and I am sure many of them will at subsequent meetings -- I am sure you will have input also of other members who are not here represented, who have considerable concern with industrial development; the satellite industries, and other aspects of the overall problem. This is the genesis, the background of why we moved into this rather unique study. We sought your support and your assistance in this.

We emphasized we do not have the answers and we think it is going to be very difficult to find the answers. But the need as never before, because of this acceleration of commerce, of science and technology, of population and demand on trade is such that we have to move in new directions, new techniques, new approaches and new responsibilities.

This, we hope, will be an example of these, perhaps an example which might benefit our nation, and certainly our region.

I-C PUBLIC HEARING STATEMENTS

ON 11 JUNE 1970, SACRAMENTO,

CALIFORNIA

PUBLIC HEARING: MARTINEZ

5 JUNE 1970

Statement of James T. Ritch, General Manager, Contra Costa County Development Association

...It was the Development Association which, acting on behalf of the Contra Costa County Board of Supervisors, the Port of Stockton and the Pacific American Tankership Association, filed a brief with the Army Corps of Engineers in July 1958 requesting a feasibility study of the San Francisco to Stockton channel improvement project. The Association retained Col. H.S. Pond, USA retired, former San Francisco District Engineer, and I assisted him in putting that brief together.

Although the House Public Works Committee had adopted resolutions in 1955 and 1957 on the subject of the channel, it is my understanding that the late Congressman John F. Baldwin used our brief as the basis for his request for an allocation of study funds. This was followed by an appropriation of $365,000 for that study.

I cite this to call attention to the fact that a period of 12 years elapsed from the time of the formal request for a study of the project and the actual start of construction in 1970. From the time of the first official discussion, the interval was 15 years.

The project is described in House Document 208 of the 89th Congress which approved it in 1965. Approval was based in part upon findings of the Corps that the benefit-to-cost ratio was 2.4 to 1. I would assume that tonnage statistics for calendar 1964 were used in arriving at that figure.

If this is true, a comparison between tonnage figures for 1964 and 1968, the latest year reported by the Army Engineers in "Waterborne Commerce of the U.S., 1968", reveals some interesting facts. These facts would indicate that if the benefit-cost ratio were refigured on a basis of present day tonnages and those which will show up in the subsequent official reports of the Corps, it would be substantially higher than the 1965 ratio of 2.4 and perhaps double that figure. It might be even greater.

The adjusted total of tonnage for San Francisco Bay and tributaries in 1964 was 42,435,221. That would make the San Francisco Bay about the fourth or fifth port in the United States in amount of tonnage. 1968 registered 45,075,270 tons, according to Waterborne Commerce.

The increase for the four-year period was 6.2 per cent.

During this period tonnages credited to docks in Contra Costa County increased from 30,461,558 in 1964 to 33,632,098 in 1968 for a gain of 10.4 per cent.

The increase for the Port of Richmond was 11.25 per cent. That of San Pablo Bay and Mare Island Strait was 131.5 per cent, the gain being from 2,436,162 tons in 1964 to 5,641,540 in 1968. Parenthetically, this tonnage is quite a bit to San Pablo Bay docks. It is about 1,000,000 more than the entire tonnage over the docks of the Port of San Francisco and 1,000,000 over the docks of the Port of Oakland.

I use the above figures to show that use of shipping channels is increasing in the upper reaches of San Francisco Bay.

In the case of San Pablo Bay, it is logical to assume that this large increase has been due to the fact that Sequoia Refining Corporation

went on stream during the four-year period and that its shipping, along with that of Union Oil of California, account for the 131.5 increase.

The 11.25 per cent increase in Richmond's shipping may be credited to the fact that Standard Oil of California, in that year, completed construction of an $80,000,000 isomax complex which increased the Richmond refinery's daily output.

During the same year, Shell Oil Company completed a $60,000,000 refinery complex at Martinez. I am inclined to believe that some of the increased tonnage which resulted may have been included in the 1968 figures of the Corps. There was a slight decline in the tonnage credited to Carquinez Strait, which would include the C. & H. refinery at Crockett and the Shell and Amorco docks at Martinez.

However, since 1968 a substantial volume of shipping at Benicia has resulted from the opening of the Humble Oil and Refining Company refinery there and shipping developed by the newly reconstituted Port of Benicia. We've been told that the Humble refinery will develop from two to five million tons of shipping a year.

I'm sure others appearing in the Corps' hearings on the In-Depth Study have emphasized the matter of increasing draft and capacity of the bulk carriers under construction throughout the world and just now coming into service, some of them running to 250,000 tons and more. The largest now, I believe, are 79,000 tons. These large ships -- you are quite aware there are more than 200 of them -- will be unable to enter Golden Gate or navigate the present channel to Contra Costa docks, that is, fully loaded.

A great deal of weight in the 2.4 benefit-cost figure of the Corps in 1965 apparently was given to the costs of lighterage incurred by the larger shippers along the Contra Costa shoreline. At the present time, ships of from 60,000 to 80,000 deadweight tons are able to reach Benicia docks to bring crude oil to the Shell, Phillips and Humble refineries, but generally they are required to offload some of their cargo in the lower bay.

Within a few years, there will be a seventh or an eighth oil refinery in the San Francisco Bay Area since Signal Oil and Gas and Douglas Oil Company own sites at Crockett, Hercules and Pittsburg and developments in Alaska foretell more oil refining on the West Coast. I think this indicates there will be more refining on the West Coast, and probably in the Bay Area.

It is also logical to expect that there will be large-scale developments in the steel industry in view of the announcements of Bethlehem Steel Company and National Steel Company that both plan to build integrated mills at Richmond and Collinsville. These announced projects will depend upon bulk transport of ore, coke, limestone and other components, most of it by water and most of it by deep-draft carriers.

Within the past three to four years, United States Steel Corporation has started shipping steel in the form of billets from its Fairless Works in Pennsylvania to the Pittsburg plant. U.S. Steel also has plans for an integrated plant at Pittsburg when competitive factors and market advantages permit. These plans were announced in 1960.

I was impressed by an illustrated talk by Col. Frank Boerger last year when he was San Francisco District Engineer. He was subsequently quoted at length in a Sunday story in the San Francisco Examiner. The essence of the article, as I recall, was that unless the United States provides deep channels to accommodate the new breed of supertankers, there is a good chance that much of our heavy industry depending upon cheaper transport of crude oil in bulk may migrate to Ireland, Holland, Canada, Spain and Japan where the channels are adequate.

Looking at the San Francisco Bay Area from the vantage point of industrial Contra Costa County and understanding some of the problems faced by the heavy industry along this shoreline, I can appreciate that the warning issued by the Corps through Col. Boerger points to a real and present threat.

I appreciate the opportunity of making these views known to the Corps and the Congress.

Statement of F.R. Henrekin, Executive Director, Solano County Industrial Development Agency

...World trade is one of the principal economic activities of the Bay Area. We are in competition, not only with other West Coast and National ports, but with similar facilities throughout the world. Research into current and future import and export commerce is needed. We must determine what channel and port improvements are required to accommodate modern vessels in order to remain competitive. The interrelationship of water, rail, highway and air transportation must be studied.

All public and private studies forecast a substantial population growth in the Bay Area during the 1980-1990 period. Employment for this growing population, plus those presently unemployed, must be provided. Industry must be attracted to employ these people, a part of which will require modern water transportation. These industries will help provide and maintain a tax base to support good schools, municipal services, cultural activities, and all the amenities of good living.

The United States must increasingly depend on the importation of minerals and other raw materials from Pacific areas and Alaska. This material will move by bulk carrier and tanker, with costs decreasing as the capacity of the vessels increases.

The Pacific area and Alaska have large supplies of raw materials so that the San Francisco Bay System and its ports have a responsibility to the nation, and not just the immediate area. A modern navigation system with ship channels of sufficient depth to accommodate modern vessels is vital to the economic future of the Bay Area. It is also extremely

important to the balance of payments of the United States.

We believe that the in-depth navigation and economic study of the San Francisco Bay Area is of great importance to the future of our area, and we pledge our support and assistance to the Corps of Engineers in this program.

Statement of Robert H. Langner, Executive Secretary, California Marine Affairs Conference

...I think it is particularly appropriate that you are meeting here tonight in the heartland of the Golden Gate regional industrial development, the area represented by the various witnesses, including Mr. Henrekin, who comes from Solano, which holds a large amount of heavy industry. It is probably no accident that the center of the present industry along these shorelines is located here.

It is difficult to find any new industrial development anywhere in this area that is not associated with development of water transportation. The location of Humble Oil here is predicated on deeper access. A large proportion of the tonnage of the Golden Gate will be through this county's terminals and docks.

It seems to us that social and human progress ultimately is obviously dependent on an economic basis, taxes, income, where all are essential to human progress, along with gainful employment in something productive and meaningful for mankind. These come primarily from industry.

Application of technology and resources in industrial revolution never has been applied as effectively and efficiently as in the United States in the last century. This apogee we have reached in the industrial revolution and accelerated production has produced an affluent society, both in its good and bad aspects. This has allowed the United States, with all the admitted defects in such a system, to enjoy an affluence never known before, to accommodate the burgeoning population, to become an arsenal of the free world.

Ours is still a steel-based society basically, and I recall in my remarks on Tuesday's meeting an apparent lack of national concern. This has produced many of the problems which I referred to in the in-depth reports and other reports.

Certainly areas of widespread public concern are the problems of pollution. This has forced us to face a more subtle problem, that is, the problem of national policy, whether we should at this time, or in the near future, abandon a policy which has been held for many years and which has been particularly rewarding for the United States, the policy of liberalizing trade. Many of us have long held that this is a very good tenet of our national posture and a major ingredient of our prosperity.

Today there is a push toward protectionism, and undoubtedly in the eyes of most economists an accelerated push, a long and most prolonged pressure.

But there is an alternative to protectionism, and that is to meet our competition as we always have, by technology, determination, scientific ability, and the resources of our people.

People point to the fact that an estimated 25% of the steel used on the Pacific Coast comes in from other countries, despite the quotas. The alternative, of course, is to produce steel here more efficiently and more cheaply. We do not have, as I mentioned in my last appearance, any real basis for steel production north of Southern California. We are still a deficit area, which affects our cost in many ways. We have a huge canning industry by bringing in materials and making plate here, but we don't produce our own steel.

A major factor is raw materials and an assoicated factor is the cost of shipping. In both cases these are waterborne. The Japanese learned this lesson will and developed the efficiency of their ships. I would like to quote from an English magazine which has just been referred to me, an article on the economies of scale that come from large ships, and this is what is happening today. Much of the shipping today is in ships of over 100,000 tons or 150,000 tons. Fifty-three are in construction and 155 are on order. Ships of 200,000 tons will be commonplace. Ships of over 300,000 tons are already in operation. Ships of 500,000 tons are planned, and a tanker of 1,000,000 tons is in the design stage. The competitive pressures in the world oil market already are pointing toward the 500,000-ton tanker. The development of these supertankers indicates the point reached by economics. A ton of oil shipped in a 200,000-ton tanker from the Persian Gulf results in a cost of some 20 shillings per ton. The cost in a 50,000-ton ship, however, is 53 shillings, more than twice as much, and in a 20,000-ton tanker it is 105 shillings. Even in a 50,000-ton tanker which can avoid the long haul around Africa, the price only drops two shillings.

Demand for crude oil is growing at such a rate that it is impossible to build all the 50,000-ton tankers the market would require. It would also be absolutely impossible to provide enough trained crews.

Finally, I would like to point out the technical achievements. Even a million-ton tanker is not too difficult to design. This magazine is a conservative journal, and you may not like this vision of the future business which seems to be upon us, but we must have the economies that

such efficient transportation requires. If we do not, we can certainly expect a continuing problem of balance of payments, and perhaps increased competition.

Appropos of the size of the modern ship, perhaps some of you noticed the tanker that came in, the 131,000-ton deadweight tanker SS SAN JUAN VENTURE, operated by Marcona in association with the Japanese. This almost 1,000-foot long combination tanker and freighter had problems and came into the Bay to pick up fuel. If it had been fully loaded, it probably could not have come over the bar. I know this ship is not by any means the largest ship in operation. It is certainly small in comparison with the ships which are projected. That company, by the way, pioneered the technique of shipping ores in slurry form.

All of this relates back to my remarks about steel and iron ore needs. It has also been suggested that much of the research that we as sponsors or proponents of the In-Depth Study require could be obtained by published reports from the steamship companies. This is partly true, I am sure, but our experience is somewhat in contradiction.

I recall a report made by the Judge Director General of Europe's, in fact the world's, largest port complex of the requirements of industry, chemical and other industries at Rotterdam. The man who has been in charge of this remarkable development, which has been so important to the development of the economy of Europe, asked their opinion as to the size of the channels that should be provided for tankers serving the Middle East. They gave him their projections, and he found as each year went by their projections were grossly inadequate. He felt that his plan would project

better economies of scale than those that had been given him. He therefore provided a plan for making his own projections, which has been fairly accurate.

Understandably, the coast industries are so busy with the rush of competition and the claims of time, the tremendous acceleration of technology and change, that they have not been able to give as much attention to research. An example might be the first or second voyage of our own form of supertanker, the SS MANHATTAN. This, as you know, has been a heavily involved government operation, both U.S. and Canadian. This does emphasize that government has a major role to play, even where the oil is for transport by private owners and for private consumption. This is just one aspect that we have seen.

The data and information required in working out these problems of economies of scale, supersized ships, moving ore and raw materials throughout our region, and the implications for industry generated following this access as referred to by Mr. Ritch, these matters are beyond any individual entity's capabilities in terms of present ports. Certainly with the costs involved, the Federal government has a responsibility constitutionally to plan for, justify and finance the construction and deepening of our channels.

I would ask that this concept, this particular field of deep draft access and raw materials and industry be coordinated with the entire phase of safety and pollution and planning. This area is probably the most acute aspect of the In-Depth Study. This is only one facet. The implications for a region so great we feel is something which should be emphasized.

Another aspect which I mention here we do not fully understand, that requires that all elements work very closely together, the public and the industrial, and all the elements of our society which would be affected or not affected, that is, affected adversely or favorably by these developments. I do not think this study is a panacea, but I do feel the data it can produce will not only have great influence on the planning here, but just as the Bay Model, and so forth, have had tremendous impact on planning approaches and perhaps the future utilization and enjoyment of resources.

Such a monumental United States study cannot always prophesy results. In the study made by John Reber, some of the results were totally unforeseen. Perhaps some will find it more favorable and more to their liking than others, but certainly the information and data and the sheer results of these things bring to the public, to the public eye, to the public scrutiny, debate and dialogue. This may be, perhaps, a Pandora's box in a sense, but I do say it is essential here in planning for the future, for all agencies, private and public, aesthetics and environment...

Statement of A.W. Ward, Advisor on Water Pollution, Sierra Club

...This evening especially I would like to give my views relating to the deep water channel. I would like to express my appreciation for this opportunity.

I know that it may be stretching the rules a little bit to allow me to appear again after that previous rather long dissertation, but I feel very deeply that your decision to allow me to speak is correct.

I think the people of the United States are very derelict at this time. We are not appreciating the seriousness of what has happened to us, and we are not comprehending at all what is planned to degrade the situation of our biota and all life.

There is scarcely a river, there is scarcely a lake, there is scarcely a large stream in this United States that isn't, to a greater or lesser degree, degraded to the extent that the waters are no longer potable. The soils are deeply contaminated in many spots, especially in the projects, in the Northern California projects that have removed so much water already that there isn't sufficient to flush out the pollutants that have gathered since the time that first Central Valley Project was promoted.

I have to speak of those things because the people accepted them, not as they developed; they accepted them as a promise. There was a promise to put back into San Francisco Bay sufficient water to wash out the pollutants and to render the Bay and its Delta nonsaline. That was promised. It was promised for $170 million to make a project that would supply the Bay and estuaries with sufficient water to keep everything clean. It didn't happen.

The first project for $170 million developed into over a $2,000,000 project.

The second promise was to build a project for $1,700,000,000. They have spent over $3 billion on these two projects, and have yet to complete them. According to the figures of the Districts themselves, it will take $11,500,000,000.

So if we have broken promises, what has happened ? What has happened is that nothing has been upgraded. It has practically destroyed the biota of the whole, entire entity. The striped bass and salmon are nearly extinct. You can hardly believe it, unless you believe what that means in dollars and cents, or nonsense. We are now on the threshold of a gigantic industrial complex, and I think you have to be just as careful. Let's this time be careful, very, very much more careful than we have ever been before. This industrial complex visualized on the Sacramento River the development of enormous atomic power plants where they have no business to be at all. If they should be granted permission, which is doubtful, they should be, of course, always on the coast where there will be sufficient water at least for cooling. If they are on the coast, we haven't any assurance at all that they are not going to be harmful to the biota.

The P.G. & E. themselves are developing the plant down in San Luis Obispo. They have made a very good promise that they will gather up the abalone and move them away. The eelgrass that supports the very few black crabs that we have left, whether it was the hot water or whether some residual effect of the atoms, we don't know, but the black crabs that

have never missed, so long as man can remember, in Humboldt Bay are gone. They don't go in there at all.

Those things are serious, one species after another being lost from pollutants of one kind or another. This particular time it was the atomic power plants that we are promised -- I think their number is something like 40 to be constructed in the next four years.

And the Grand Canal, if you want to call it the "Grand" Canal, it doesn't appear on the surface of this project any more serious than the promises of a $2 billion project for $170 million or an $11 million expenditure for a billion seven hundred thousand. On the face of it, it looks perfectly plausible to build this tremendous plant. We are not discussing it. I did not see it named as the Baldwin Channel here. The Baldwin Channel is one thing, but development of the channel to supply tonnage to the biggest atomic plant in the world, the biggest refineries in the world, the biggest rolling mills in the world, the Baldwin Canal, could never supply ships that have a draft of 70 feet or more. They wouldn't fit very well in the Baldwin Canal.

So it seems that if the Baldwin Canal were constructed, it would be getting a toe in the door so that we would then, after these plants were constructed, they would certainly have to accommodate them with a canal deep enough to float a 250,000-ton ship. That is perfectly feasible. I think that could be managed by some of the people that are expecting to put this tremendous industrial complex up there, because one concern has already purchased 16 of these ships of this size.

Just stop and consider that little bit of a San Joaquin River, which is so small it hardly appears on the map. It isn't a great, big thing like people imagine. It is a puny, little river and now only a very small part of that river gets any further than Rio Vista. And Rio Vista -- poor Rio Vista! Go up and look at Rio Vista. Already the businesses have fallen off to such an extent that a big filling station has closed. Some of the bake shops have closed. And Rio Vista is 13 miles east of Collinsville.

Now, Collinsville is the home, or was the home, of the Italian fishermen who, in the early Sixties, built their houses on stilts because they lived over floods. With the development of our grand progress that took away the surplus, was supposed to take away the surplus water from this Northern California, but in reality built dams they knew damn well would take more than surplus water. The plot, the scheme -- it was a scheme -- and was used over and over -- when one big power takes water away from a small power, they always say, "We just want your surplus. We won't take the water you need."

Go back and look at Bulletin 77, where they promise over and over again, "We are just going to take the surplus." Well, if we build a channel to Collinsville 70 feet or more deep, and it must have to be that deep, there will be a certain number of things. According to the Geological Survey, we are taking a very brave, very, very brave danger of cutting through the clays that protect the aquifers, and although those clays do not correspond exactly to the clays near Anchorage, Alaska, which suffered a very, very severe earthquake because the clays turned to water, or jelly-like masses, in fact, due to the drilling of water wells, that

changed the character of the clays and made them jelly-like. The earthquake was very much more serious than it would have been, and there is the possibility of the entire Peninsula being disturbed by earthquakes that formerly would have not been considered serious.

Now, this man says that very type of thing could happen with the digging, with the dredging of a deep water channel from San Francisco, we will say, to Collinsville. Our clays have a characteristic that is found in the clays near Anchorage, Alaska.

Another thing, this Collinsville is 12 miles distant from the largest, or one of the largest, airports, Federal airports, in America, I believe. Isn't that right ? The largest airport that we have, probably, on the West Coast, anyway. It would be a very horrible thing if an atomic plant 12 miles from our greatest airport were to be, by accident or design -- one won't think of anything so horrible.

If such a thing did happen after this Grand Canal was built, that a ship of the size that we are considering, 250,000 tons, if by accident or design it was sunk --

There is one over in the Suez Canal that has been there a long time now. If it were this side of Mare Island, even the submarines wouldn't be able to get it out.

I think that it behooves us, it behooves every citizen in the State of California, to get busy now and see if something can be done to change the serious thing that was voted on, the No. 77. We have to do something about it. Let's be realistic. We should know if that peripheral canal is built -- and I think if it wasn't built, there wouldn't

be too great an effort to put through the deep channel -- but whether the deep channel goes through or not, the Delta is through if we allow the peripheral canal. We must do something. I don't know what. If I was a keen attorney, I would bring a suit against somebody.

I am only one that has lived here, and I love the place. I have lived in California for 70 years, and I have seen it go back and back and back because of projects where men fooled away too much time and too much money with nature, and it has always been on the downgrade. In 70 years there has never been a time when it was brought up to its former level.

I-B PUBLIC HEARING STATEMENTS

ON 5 JUNE, 1970, MARTINEZ

CALIFORNIA

PUBLIC HEARING: SACRAMENTO

11 JUNE 1970

Statement of Michael Morford, Fish and Wildlife Biologist, Bureau of Sports Fisheries and Wildlife, U.S. Fish and Wildlife Service

...San Francisco Bay is one of the most important estuarine systems in the world. It provides essential habitat for several important anadramous fish species as well as spawning and nursery area for numerous marine fish and shellfish species. In addition, the Bay provides habitat for marine mammals, waterfowl, shorebird and non-game bird species. The California Department of Fish and Game in 1968 estimated that fish and wildlife resources of the San Francisco Bay-Delta area supported 3.5 to 5 million man-days of recreation use and contributed to an ocean commercial fishery that landed 5.7 million pounds of salmon.

As a result of man's activities, the San Francisco Bay and tributaries have been undergoing rapid ecological changes. This process is expected to continue to accelerate as a result of development in upstream areas and with increased urbanization, or industrialization of shoreline areas.

The Bureau of Sport Fisheries and Wildlife recently completed a 2-year study of effects the John F. Baldwin Navigation project would have on the fish and wildlife environment of San Pablo Bay. The results of this study will be available in the near future and the results hopefully will be useful in minimizing effects on fish and wildlife and also in determining opportunities for enhancement. In addition, this Bureau has two refuges under active consideration, one in South San Francisco Bay

and one in San Pablo Bay, to protect these important fish and wildlife resources.

We are looking forward to active participation in the In-Depth Study of San Francisco Bay which will define future needs of the area. We expect that to maintain the existing resource values, progressive thinking and development of additional management tools will be required.

We have been encouraged by recent steps taken by State, Federal, and local governments as well as private industry in focussing more attention on environmental problems of concern to all our citizens.

Statement of Edward Ehlers, Supervisor, Coastal Zone Management Branch, California Department of Navigation and Ocean Development

...We are a new agency in state government having been formed in 1969 as a result of the Governor's reorganization plan number 2, which took a group of other functions that are oceanic in orientation and navigation orientation and grouping them into what is now known as the Department of Navigation and Ocean Development.

I am principally concerned with the oceanic side of our operation and have taken with it some of the navigation concerns that the department has assumed. And would like to take a moment to cover some of the things that we are looking into and some of the areas in which we are assessing the depth of our role that will later lead to a more definitive position relative to this study and hopefully some degree of participation and contribution.

We are presently engaged in the preparation of a comprehensive oceanary plan which includes the coastal zone. It is for the coastal zone of California, including the principal bays and estuaries which are an integral part of this zone as we see it.

As we get into the Bay Area we, of course, share this concern with the Bay Conservation and Development Commission which I assume has made testimony available at an earlier hearing. In this plan we are looking to the development -- the evolution of a series of policies that will guide the State and its entities and hopefully others who plan and manage in the coastal zone, into moving toward a better balance between the preservation and development of our coastal zone. Realizing the opportunities that are there and to the extent we can precluding adverse modifications.

Another facet of this plan is the development of a Management System that will take these policies and implement it. This is one of the particular charges of my Coastal Zone Management Branch and one of the things that will be -- the management will be of considerable concern and when we look at the question of harbor development and the -- and how we handle the volumes of commerce that must traverse through and from our coastal zone and the harbor facilities located there, another responsibility that the department has is to prepare the marine terminal transportation and navigation element of the state-wide multimodal transportation plan. This plan is the basic responsibility of the Business and Transportation Agency and our department will be providing and developing that segment of the statewide plan.

That, of course, is an associated concern with the thing you have under consideration here on the San Francisco Bay In-Depth Study. Additionally, this very similar work will provide input to the comprehensive oceanary plan that we talked about earlier. We are also interested in intercoastal high speed transportation and this of course is related to the question of terminal facilities that will undoubtedly be necessary in areas such as San Francisco and the degree of their compatibility with the normally considered commerce and terminal facilities.

I would close by saying that we are extremely interested in the study and the scope of the -- interested in the data that we hope it will produce. We are interested in working with you to establish a compatibility upon data gathering boundaries so that the data you collect is compatible and usable in some of the studies that we have done in the

past and see to be done in the future; that we get into the questions of origin and destination of commodities, particularly their origins and destinations beyond the terminals themselves, where they come from in the hinterland and the relationship of these to multimodal needs, and also to the philosophical and policy questions that we must reach in terms of the ultimate capacity that we design into our existing natural harbors and bays and estuaries before we look to other alternatives that may demand new technological developments and new on-shore facilities that we are not now contemplating.

We look forward to cooperating and working with you in this and we will be back to you at a later date to express in more detail and perhaps a little more succinctly how we can get into this.

Statement of Gordon Finley, Chief, Division of Economic Development, California Department of Commerce

...I am Chief of the Division of Economic Development of the California State Department of Commerce, whose primary function is to aid in developing a diversified and expanding economy which will create new job opportunities for the state's rapidly growing labor force.

Since waterborne commerce and its future development in the Golden Gate Region has a great impact on California's economy, the State Department of Commerce is vitally interested in this study.

To properly evaluate the San Francisco Bay Area economy, its trends, future growth prospects, and new employment opportunities in the field of foreign trade moved by waterborne transportation, there is a great need for the following types of economic data:

1. First and most important are commodity flows. Movement of specific products in and out of the Bay Area ports (including Sacramento and Stockton), their quantities, origins and destinations -- in total and by individual ports. This data, especially that on California manufactured, processed, assembled, and produced waterborne exports, will aid the State in the economic aspects of its statewide planning program.

2. Types of industries expected to make greater use of waterborne transportation in the future -- existing types and prospective new types, their location and land requirement within the Bay Area, and increased employment opportunities therein.

3. Channel depths needed and their location to accommodate the largest and deepest draft vessels to serve certain type industries.

4. Trends and possible future changes in cargo handling of waterborne commerce and the effect on employment opportunities.

While these are the principle types of economic information which would be most valuable in the assessment, planning and implementation of

appropriate programs for contributing and guiding the future growth of the San Francisco Bay Area, we would also be interested in other areas of the study.

Therefore, the Department of Commerce of the State of California heartily endorses this study and will cooperate with the U.S. Army Corps of Engineers in making the study in whatever manner our staff and budget capabilities permit.

Statement of John M. Haley, District Engineer, Central District, California Department of Water Resources

...I am pleased to appear before you this evening to express the views of the Department of Water Resources on your In-Depth Study of the San Francisco Bay Area. We in the Department will be happy to cooperate and participate in any way we can. We are also interested in following the various facets of the study as it progresses, particularly as they relate to the development and beneficial use of the water resources of the State, including the environmental aspects of the Sacramento-San Joaquin Delta.

The Department of Water Resources conducts investigations and broad planning studies directed toward statewide water development. As part of this work, we have estimated and are continually updating the present and future uses of water, land, and economic development in California. We have also conducted extensive studies of the Delta-Bay area both in connection with the planning and implementation of the State water project and the development within the area itself.

These, of course, include the Interagency Delta Committee studies that led to the Peripheral Canal Coordinated Plan of Development for the Delta in which the Corps participated. As in the past, we will be pleased to make any other pertinent information available to you.

The Department of Water Resources has a direct and continuing interest in studies of the Delta-Bay area. State law requires that the State Water Project, in coordination with thc Federal Central Valley Project, be operated to provide salinity control and to maintain an adequate water supply in the Delta. Further, the State is committed to

operate the Peripheral Canal to protect and, where possible, enhance the Delta's aquatic environment. This will be accomplished by adhering to water quality criteria to be established by the State Water Resources Control Board, and any agreements which may be entered into between our Department, the Bureau of Reclamation, and the Delta water users. The State Board has already set interim water quality criteria as an initial commitment.

As we understand it, your hearing is mainly a navigation study of waterborne commerce and harbor development -- one that will take into account the needs of an expanding industrial complex and growing population -- and the trend toward increased used of super-sized vessels. In light of our direct involvement in managing the water resources in the Delta-Bay system, we urge that any of your studies involving authorized or proposed plans for improving navigation channels or port facilities include the following:

1. Determine how deepening and straightening the channels affects the amount of outflow necessary to control salinity intrusion. Such work increases the tidal prism, shortens the path of salinity intrusion and increases the diffusion coefficient. This could increase the salinity intrusion with a given amount of outflow. Any such project should bear its fair share of the responsibility for maintaining salinity control criteria to be established by the State Water Resources Control Board.

2. Determine the effect of deepening channels or dredging port facilities on pollution problems, i.e., dispersion, tidal exchange, etc. The dissolved oxygen sag at Stockton where the San Joaquin River has been deepened for the Stockton Ship Channel is an example.

3. Determine the amount of pollution and make provisions to remedy same for both authorized and future improvement projects due to increased navigation traffic.

4. Conduct geologic exploration to determine the location of any freshwater aquifers that might be exposed by deepening the channels, and if necessary take measures to protect local water users. If it is found that channel work would expose freshwater aquifers, a water quality study should be made to determine the magnitude and extent of any ground water quality problems that might develop.

5. Determine the effect, if any, of increased navigation traffic and size of ships on levee maintenance in the Delta area. In this regard, the Department of Water Resources, in response to Senate Concurrent Resolution No. 151, 1969, is beginning a 3-year study this coming fiscal year to formulate a plan of improvement of Delta levees to upgrade flood protection and for recreation, wildlife, and aesthetic purposes. To develop a mutually satisfactory plan, including an equitable means of cost sharing among the beneficiaries of the plan and contributors to the problems of levee maintenance, it will be necessary to coordinate at all levels --Federal, State and local.

This concludes my remarks for this evening except to thank you for the opportunity to express our views at the outset of your study and to again offer our cooperation and participation in any way we can be helpful.

Statement of Robert A. Morrow, Planner, Association of Bay Area Governments

...I'm an employee of ABAG, the Association of Bay Area Governments. I'm actually speaking in behalf of both ABAG and the Regional Transportation Planning Commission which was formerly BATS.

By way of introduction, it was over a year ago that Colonel Frank Boerger of the Corps reviewed for the ABAG Executive Committee at its March 1969 monthly meeting the proposed In-Depth Study. Although no formal action by the Executive Committee was requested or taken at that time, the ABAG President, Jack Melteaster, Mayor of San Leandro, assured the Colonel that the Corps would have the full cooperation of the association.

The Executive Committee, as I think most of you know, is composed entirely of elected officials representing the cities and counties of the entire 9 county Bay Area. ABAG and ARTPC is interested in the proposed study for many reasons, and I think one of the most obvious reasons, not the least of which, is the anticipation for ourselves of finding out both hard facts and anticipated facts of alternative situations about the Bay Area, the data resources applicable to our own regional programs.

I think it should be noted, emphasized in fact, that the region's first economic life is centered around the use of the Bay and its tributary systems and its economy is still very much oriented towards trade and related services.

I'd like to reiterate and to emphasize some points in my presentation, even though they may have already been stated in previous hearings. I do not attend those hearings, so I may be repeating things, many things which you've already heard.

We would suggest, first of all, that a scrutiny be made of already formal regional plans in the Bay Area. The Association's own regional plan was just last month approved by the Executive Committee. The Regional Transportation Planning Commission transportation plan was virtually hot off the press, being just a few months old. The BCDC plan, the Bay Conservation and Development Commission, plan is barely a year old. These three primary regional plans as well as some of the various specialized plans and the local plans we feel should be among the first order of business in both redesigning your in-depth study and then actually undertaking the study itself. I think we suggest that you note in particular the various developmental environment association and economic goals and policies of these plans.

We feel that you should note the vast potpourri of demographic economic transportation, physical data already collected and analyzed for these plans and for these supplementary plans. We feel that a great deal of duplication can be avoided in this means.

At its last meeting, the ABAG Executive Committee directed the staff to present testimony at this -- one of these three hearings. And they directed the staff to present testimony pertaining to three specific items. Listing them are: Oil and gas spills and leakage studies; transportation scope and coordination; and three, coordinating data resources.

Covering the first item first, that dealing with the oil and gas leakage, we want to emphasize the need for a comprehensive Bay-Delta Model study on oil-gas leakage and spillages. On page 25 of our study design there is a passing reference to permit analysis through the

Bay-Delta Model studies of the effects of oil spills, reclamation and dredges spills disposal in the Bay system.

We urge that a definite commitment and scope description for such an analysis be incorporated in your revised study design.

In addition we recommend that in relationship to the Inter-Department study that this model analysis be among the first subjects undertaken in program scheduling, if at all possible.

The Association has formerly expressed its concern to the Corps on this subject matter in the past. For instance, in the fall, last summer of last year, in August, in fact, Executive Committee unanimously adopted a resolution requesting the Corps to use -- utilize the Bay-Delta Model for such tests and studies to ascertain consequence of oil leaks and spills in the Bay Area. Several reasons why we are choosing this as one of our three main points this evening.

The Bay is a major influence in the development, character, climate, and quality of living in the region. Its preservation is a vital resource -- as a vital resource is of utmost concern to all of us who do live in the Bay Area. In addition, citizens of the region are increasingly aware of the ease in which the Bay Area environment can deteriorate and at the same time their expectations about environmental quality appear to be rising.

In existence on the Bay are several complexes that import and export petroleum commodities. These include not only the major ports of San Francisco, Oakland and others, but the numerous Bay-oriented military installations, such as Point Malloy, Mare Island Naval Supply Center,

in addition several major oil refineries are located along the coast of Contra Costa and Solano Counties. Other large distribution and storage facilities are located throughout the Bay for petroleum products.

Now, while no really major oil spill disaster has occurred to date, some minor ship spillage accidents have occurred quite recently. In tonnage, the principal cargo passing through the Golden Gate is petroleum. Nearly 65 per cent of the total Bay Area shipping tonnage is crude oil and its refined products, such as gasoline, with increasing amounts of foreign crude oil being shipped to the Bay Area refineries. Petroleum traffic will undoubtedly continue to play a major role in our Bay Area commerce.

In recent years there has also been a dramatic increase in the size of tankers for carrying oil commodities. Tankers now have a capacity of up to almost a quarter of a million tons. Studies have demonstrated that the feasibility of a tanker with a capacity of up to a million tons is possible, however studies by BCDC and others -- through studies by BCDC it appears that the largest tanker needed to enter the Bay for some time is probably a quarter of a million tons. Therefore, because of this potential major disaster of the -- the carrying of these ships, we feel this is one major element to be considered.

As opposed to the ship and tanker oil spills, oil drill leakage disaster situations do not appear to pose a problem at this time because no Bay drill operations are in existence, but we also feel that this aspect of the study should not be excluded. Any evaluation of potential plans for the future of such underwater drilling operations would be

vastly enhanced by comprehensive knowledge of various leakage disaster situations, either by their intensity or location.

Interest in oil and gas resources of the Bay Area, including possible reservoirs beneath the Bay floor, is growing. Past exploration indicates that a major oil or gas field may be in existence in fact. At least one major oil company has fairly recently proposed a construction of three production platforms in -- at one of the susidiary bays. Information currently available indicates such drilling would be confined to the eastern part of San Pablo Bay and some of the river tributaries.

In addition, analysis of the characteristics of the potential oil pipeline leakage between teminal and refinery or distribution points should be specifically included, we feel, in this Bay-Delta Model. This is because an increasing proportion of gasoline and other petroleum products are now being so piped. Pipelines can either be extended along trestles, attached to a pier or placed on the bottom of the Bay to connect with their refineries ashore. Docks for petroleum transcendence have been built at the six operating Bay Area refineries, all of these now are in East Bay. Storage and distribution terminals for petroleum products are located at several points around the Bay, including Oakland, Richmond, Martinez, Redwood City, San Francisco and other locales.

You might note, too, and I suspect that this has already been brought out, that under the Bay Conservation and Development Commission's plan there is a Central Bay Supertanker oil terminal proposed just north of Treasure Island, in the middle of the Bay. Pipeline connections from this terminal to the major refineries and storage areas are envisioned

in this tentative proposal.

In summary on this first point, a study through the Bay-Delta Model of oil and gasoline leakages under any number of bearing conditions is urged. It is one of our priority items is program scheduling and such a study should cover petroleum sources as vessels, subwater drilling and pipelines. Item two, dealing with the transportation study, the Association along with the Regional Transportation Planning Commission, strongly urges that all transportation oriented elements be closely interrelated in the final study design. And in fact, that a fairly formal review structure be organized involving the participation of numerous -- the numerous transportation oriented agencies in the area. Perhaps even on the level of scheduling regular review sessions.

Concerning point one, and this is in particular reference to your proposed scope element intermodal transportation study, a waterborne commerce study of the anticipated comprehensiveness that you propose we feel cannot be detached from the study also of area characteristics and capabilities as they pertain to transportation linkages, either inter- or intra- model; transportation access and storage capability to Bay oriented land use activity and facilities, transportation movements, characteristics and patterns and terminal characteristics and types, and this concerns both people and goods.

In addition, the importance and significance of growth of trucking and freight movement characteristics we feel are among key considerations to analyzing relationships between Bay Area oriented commerce, industry, employment and shipping resources.

The importance of trucking we feel should not be underestimated. We feel that this, as far as data analysis, this is one of the real gaps in the whole transportation network. For one thing, virtually all foods used by the Bay Area residents are moved by trucks on urban highways several times before reaching their final destination.

Truck registration constitutes a substantial fraction of the total vehicular registration in the Bay Area. Something over 12 per cent for the entire region. We feel that the thrust of construction activity for the transportation systems in the Bay area should be closely evaluated. We all realize that this major thrust to date has been toward freeways, bridges, roads and streets, involving an annual expenditure of more tha $200 million dollars.

Routes now under construction have a main purpose of linking up major subareas in the region and serving as distribution highways for long distance inter-city travel. Characteristics of travel flow should be analyzed for their implications.

For instance, the annual growth rate of motor vehicle runs about 12 per cent, slightly above 12 per cent for the region -- five per cent for the region. But in fact the movement of persons has not risen at the same rate at all. In fact, following auto occupancy correlated with the rising rate in auto ownership has been observed in many areas.

In summary concerning this one point on the transportation study, it seems that certain demonstration projects may be in order which are not explicitly stated in your study, but we would suggest that they might be well included.

These are -- sometimes in certain cases they are inferred. New water craft concepts for San Francisco Bay crossings to provide supplemental services for a special situation and to connect to interrelated design surface transit in certain areas we feel is one of the most important potential studies. Increasing adoption of multiple use of right-of-way concepts along freeways as it may relate to water commerce. Also, encouragement of experimentation with steam and electric powered vehicles of various types.

Concerning the transportation agency coordination, I think a list of potential participating agencies is fairly extensive and should definitely include at least some of the following non-Federal agencies. You in your study go into a great deal of depth in analyzing the Federal agencies that will coordinate -- cooperate -- be involved directly in your program. In addition to the various port departments, obviously we feel that the Regional Transportation Planning Commission, San Francisco Muni, Greyhound, A.C. Transit, BART and the various trucking associations, the International Airport, San Francisco International Airport, the Southern Pacific Railroad. I think obviously the State Division of Highways, Golden Gate Bridge Authority, State Public Utilities Commission, State Department of Public Works, these departments and agencies should all be very definitely involved right at the beginning.

So, to summarize this point 2, we feel that to set up an effective technical liason group quite early in the project would be well worth the while of everyone involved.

Concerning item 3, the last item on data, the Association on the Regional Transportation Planning Commission offers the full range of their vast storehouse of statistics and descriptive information on resource, on both existing and projected data as inputs to your study.

As agencies dealing on a regional level, such information offers, we feel, a unique overview of regional characteristics, and is additionally a vital supplement to cross check other more localized data sources that you may use. Some of the basic data that we offer for your scrutiny includes that for population, land use activity, employment, transportation, special facilities, physical characteristics, regional growth trends and characteristics. This data is compiled in a variety of statistical area breakdowns, such as census tracks and many others. Much of it is projected to 1975 and much is projected even up to 1990.

For our own purposes the end products of such data were and are used for preparation of regional development and transportation plans along with their special supplemental plans as I noted before. We would strongly advise the staff of the In-Depth Study to closely study these plans for guidance and some of which are virtually hot off the press.

I might note some -- well, we feel important recent ones. First of all, the Bay Area Transportation report with various -- several technical background documents which was prepared in May of 1969. This has a wealth of data.

ABAG's own regional plan which is so hot off the press it is still being printed in fact. This was approved by the Executive Committee just last month. In addition we have special historical background reports

to the latter, which may be of some use to you, including such things as the regional geology study, refuse disposal needs study, regional open space study and studies now currently under way involve water and sewer.

The Regional Transportation Planning Commission in particular has a data base which has accumulated through numerous inventories and special studies, and is one of the largest files of socio-economic data in the United States, with a system especially designed to handle this data base which constitutes an available new nucleus for a future Bay Area information system. This data base contains some 20 million items recorded on more than one thousand reels of magnetic tape. It is organized in the hierarchal system of coding by zone units, such as County super districts, districts, analysis zones, census tracks and track equivalents, traffic analysis zones and census blocks.

In addition, both ABAG and RTPC have a wide variety of map resources for your use. For instance, the Regional Transportation Planning Commission has utilized almost 9,000 aerial photographs which have been loaned to various agencies in the past few years, in conjunction with numerous local and other agencies; other classes of information available including those of land use constraints which may be defined as the extent to which non-urbanized land is non-usable and unavailable; land release which may be defined as the expectation to type, time and location of growth, and what we call the unique location and committed development which may be defined as the estimated -- estimates and recordings of special and significant, large urban development projects.

Through the development use of numerous models, regional growth

forecasts and land use projections have and are being made. Both the model design and model parameters are available for scrutiny by the Corps. In particular connection with the data analysis we feel that knowledge about the structure of employment growth may be one of the most important contributions in outputs of the In-Depth Study. In other words, we are quite happy to provide data for you, at the same time we are quite anxious to get feedback from you. This involves not only the direct analysis and findings of water oriented commerce in related employment activities, but also that of basic services in the area.

Also, potential social implications as they pertain to ethnic and age group job markets, levels of experience and industrial requirements, relative changes to existing job descriptions, and creation of totally new job categories.

In addition, to summarize my part on the data collection, data collected by the Corps on port activity and freight movements we feel will contribute largely to closing our own data base gap in these particular fields. This is where we have real data gaps, so we are looking forward to your studies for this type of information.

Lastly, I'd like to point out two points on the data manipulation nature. Number one, the specific geographic units of the data collection and analysis would hopefully be meshed in or somehow compatible with the Regional Transportation Planning Commission system. I think this is something we will hope to get together with you in the near future. And second, the method of classification of your various data units, such as land use or land activities would hopefully also correspond or be compatible

to both ABAG's and the Regional Transportation Planning Commission's codes.

Thank you, gentlemen, for being patient. I didn't realize my testimony would be so long in comparison to some of the others. I will be presenting written testimony to you in a few days. I don't have anything right now. Thank you very much.

Statement of Joseph E. Bodovitz, Executive Director, San Francisco Bay Conservation and Development Commission

...

1. The Corps' study will be of great importance to the work of the San Francisco Bay Conservation and Development Commission. For this reason we desire to be kept informed as the study proceeds, and we are willing to help in reviewing any proposed aspects of the study and any proposed conclusions.

2. The Commission's goal, with regard to maritime commerce, is to develop adequate port terminals on a regional basis to keep San Francisco Bay in the forefront of the world's great harbors during a period of rapid change in shipping technology, and to provide for these terminals with as little additional Bay filling as possible. The findings and policies on port development in the Commission's San Francisco Bay Plan are as follows:

Findings: a. San Francisco Bay is one of the world's great natural harbors, and maritime commerce is of primary importance to the entire economy of the Bay Area.

b. Adequate modern port terminals and deeper shipping channels will be needed to preserve and enhance the standing of the Bay Area as a major world harbor and to keep pace with changes in shipping technology.

c. Of particular importance for Bay planning are the expected growth in size of tankers and bulk carriers, which will require deeper channels than any now in the Bay; and new methods of cargo handling such as containerization, which requires exceptionally large specially-designed terminals and supporting transportation facilities.

d. Planning for port terminals should be carefully coordinated with other shoreline uses, should consider the Ports of Sacramento and Stockton as part of the port system available to meet future needs, and should have as a major objective the avoidance of unnecessary Bay filling.

e. No single port agency is responsible for coordinated planning and development of Bay Area port terminals. As a result, new port facilities may be built by whichever individual port can command the necessary financing, even though another site might serve regional needs equally well but with less Bay filling. In addition, a major investment by one publicly-operated port can be jeopardized by the unnecessarily duplicating actions of another publicly-operated Bay Area port. And, of particular importance to proper use of the Bay, parts of the Bay can be filled, and shoreline areas taken, for unnecessarily competing port uses.

f. Ports are not supported completely by revenues from shipping, but must be subsidized, either directly through taxes or else indirectly through revenues derived from housing, industry, restaurants, and other such uses of port-owned programs.

Policies: a. Future port planning and development -- but not necessarily port operation -- should be guided by an over-all port development plan.

b. If some ports in the regional system do not have the funds necessary to complete facilities needed by the region, a regional agency may be required to finance or develop them. Otherwise, there will be tremendous pressure to allow the ports with the strongest finances to provide all of the regional facilities, even though this might result in unnecessary filling of the Bay.

c. Some filling and dredging will be required to provide for necessary port expansion, but any permitted fill or dredging should be in accord with an over-all regional port development plan.

d. The initial regional port development plan should be as illustrated in the Bay Plan maps. The Plan accommodates the total projected cargo tonnage requirements to the year 2020 with a minimum of Bay filling. It provides for:

(1) Major expansion of port facilities at Benicia, Redwood City, and Richmond;

(2) Substantial redevelopment of existing facilities at Alameda, Oakland, and San Francisco;

(3) Possible new shallow-draft terminals near Napa, Petaluma, and San Jose;

(4) A possible supertanker terminal in the Central Bay, as a long-range alternative to constructing and maintaining ever deeper channels to North Bay refineries. (The giant ships, which may have drafts in excess of 60 feet, would use the terminal to transfer their cargoes to smaller vessels or pipelines.) The Central Bay terminal could be a small, pile-supported structure to hold pipeline connections or it could simply be a reserved anchorage; no Bay fill or storage facilities would be needed, and

(5) Further deepening of ship channels as needed to accommodate expected growth in ship size, possibly as deep as 70 feet through the Golden Gate, up to 60 feet to North and Central Bay ports, and 45 feet to Redwood City.

e. It is possible that in the future, cargoes moving between the Orient and the East Coast of the U.S. will be shipped across the United States by special trains. This would tend to concentrate additional shipping volume in one port where special facilities would be available for transfer of cargoes between ships and the special trains. Any additional port facilities required for this method of transportation should be provided with as little Bay filling as possible.

f. Port areas on the shores of the Bay should be able to include within their premises marine terminals and directly-related ancillary activities such as warehousing and other temporary storage, ship repairing, support transportation uses including trucking and railroad yards, freight forwarders, government offices related to the port activity, chandlers and marine services. Other uses, especially public access and public and commercial recreational development, should also be permissible uses provided they do not significantly impair the efficient utilization of the port area.

3. Disposing of dredged spoil, a necessary aspect of port development, is a matter of great concern to the Commission. THe Bay Plan's findings and policies on dredging are as follows:

Findings: a. Much of the Bay bottom is covered with sediment -- silt, sand, and clay -- that has been carried by tributaries from dry land upstream. Sediment continues to flow into

the Bay at the rate of about 6 million cubic yards a year; this amount is expected to decline, however, because of improved soil conservation programs and the diversion of silt-carrying waters from the Delta and Bay to other parts of the State. Only 30 per cent of the sediment entering the Bay is carried out the Golden Gate by the tides. The remainder settles to the bottom of the Bay, but may be picked up again by changing currents and carried to other parts of the Bay. Eventually, much of the sediment lodges in harbors and shipping channels from which it must be dredged at considerable cost.

b. Dredged mud is sometimes used as a fill material and occasionally some is barged out to sea; but most often, the sediment is simply dumped in a part of the Bay where it is expected to cause as little harm as possible. Even at the best of these dumping grounds, near Alcatraz Island, only 47 per cent of the sediment is carried out to sea by the tides; at the Yerba Buena dumping area, only 30 per cent is carried out the Golden Gate; and at the dumping area in Carquinez Strait, probably less than 5 per cent ever reaches the ocean. The remaining sediment is simply recirculated in the Bay by the tides, and eventually settles to the bottom where it may have to be dredged again.

c. Dredged spoils dumped at sea could return to the Bay with tidal currents or could cause local damage to marine organisms or beaches near the dumping site. These conditions are capable of being analyzed prior to dumping at sea.

d. To reduce the cost of dredging harbors and navigation channels, sedimentation resulting from upstream erosion and redumping of dredged materials should be reduced as much as possible.

e. Underground freshwater supplies are an important supplement to surface water now brought into the Bay Area by aqueduct from mountain reservoirs. Deep dredging of Bay mud, or excavation for tunnels or bridge piers, could strip the cover from the top of a freshwater reservoir under the Bay, allowing the salt water to contaminate the fresh water, or allowing the fresh water, if artesian, to escape in large quantities and thus cause land to sink. The precise location of ground water reservoirs under the Bay is not yet well known, however.

Policies: a. To prevent sedimentation resulting from dredging projects, mud from future dredging should be disposed of in one of the following ways:

(1) Placement on dry land;

(2) Placement as fill in approved fill projects;

(3) Barging or piping to suitable disposal sites in the ocean, or

(4) If no other alternative is feasible, dumping in designated parts of the Bay where the maximum possible amount will be carried out the Golden Gate on the ebb tides; areas should be designated for this purpose upon approval by both the Bay agency and the Army Corps of Engineers.

This policy is intended to apply as soon as possible to all dredging in the Bay, whether to create new channels or to maintain existing ones, but it is recognized that Federally-assisted maintenance dredging projects undeway as of January 1, 1969, may require discharge of spoils in open waters of the Bay where relatively little of the dredged material is carried out to sea.

b. Vigorous efforts should be made to find methods of spoils disposal that will provide for construction of vitally needed shipping channels, such as the John F. Baldwin Ship Channel from the Golden Gate to the Delta, while at the same time protecting the Bay from unnecessary filling solely to dispose of dredged mud.

c. Pending the completion of studies into the feasibility of new or improved methods of spoils disposal, complete compliance with the spoils disposal policy will not be immediately possible. Additional areas for spoils disposal may thus be needed within the Bay system, for maintenance dredging as well as for new channels for shipping or for pleasure boating, but disposal areas should be selected with due consideration as to which feasible disposal methods will be least harmful to the ecology of the Bay. In no case, however, should spoil be used to create artificial islands in the Bay unless competent studies demonstrate that these fill islands would have no harmful effect on water quality or on air quality.

d. All proposed channels should be carefully designed so as not to undermine the stability of any adjacent dikes and fills.

e. The Bay agency should encourage increased efforts by soil conservation districts and public works agencies in the 50,000 square mile tributary area to continuously reduce soil erosion as much as possible.

f. To protect underground fresh water reservoirs (aquifers):

(1) All proposals for dredging or construction work that could penetrate the mud cover should be reviewed by the Regional Water Quality Control Board and the State Department of Water Resources, and

(2) Dredging or construction work should not be permitted that might reasonably be expected to damage an underground water reservoir.

Applicants for permission to dredge should be required to provide additional data on ground water conditions in the area of construction to the extent necessary and reasonable in relation to the proposed project.

The Commission's work over the past five years has benefited enormously from the participation of the Corps' District Engineer as a Commission member, and we hope that the Corps' In-Depth Study will permit further opportunities for close cooperation of our two agencies in the public interest.

Statement of Melvin Shore, Port Director and Chief Engineer, Port of Sacramento

...I have attended the two previous public hearings and I have studied the call for these public hearings, the resolution. I tried my darnedest to find out what it is we are trying to do, and out of this investigation I've come to the conclusion that there is a very valid point for the Corps to investigate. And I think that valid point is the question of super-ships. The requirements of these super-ships and how they are going to be met. It appears to me that this kind of a study should properly be looked at on a nationwide basis. First, to determine where is the logical place which ports should logically be considered for super-ships, and also to investigate the feasibility of off-shore transfer and redistribution points.

The proposed study here, of course, is completely void in this last area. It may be possible that such a study would reveal that off-shore transfer and redistribution point would be the answer and do away with any need for deeper channels.

I'm not suggesting it would. But it seems to me this part of the investigation is missing and can only be looked at from a national viewpoint.

I think clearly that any such nationwide investigation would show that San Francisco should be studied to some extent for the feasibility of deepening channels into the North Bay area. So perhaps the proposed study that we are talking about here would be appropriate as a second step and if the Corps chooses or Congress chooses to authorize it as a first step in advance of a nationwide study, so be it.

I think it should be geared, however, to the obvious fact that we cannot hope in this country to deepen all the channels to 60 or 70 feet throughout the country. And this properly has led the Congress to implement this study and are doing it because they recognize that they cannot hope to finance that much deepening.

So the investigation of super-ships, we think, is a very valid point for the Corps to undertake and clearly the Corps has been involved in navigation studies and should do so.

At this point, however, I think we should define a super-ship because it is not defined. In our definition a super-ship would be one that regardless of its tonnage -- I think we get a little carried away in discussions about tonnage. There is talk about channel depths, that's what we are here to concern ourselves with.

Clearly, ships drawing 40 and 45 feet or channel depths of 40 and 45 feet have been provided throughout the country and are not what we are talking about here. I submit that what we are talking about here are channel depths of 50 feet and more, and this then, I submit, could well become the definition of the limitations of this study. Perhaps a case could be made for some variation from 50 feet, and I believe a consensus could be obtained setting a figure in that general area.

When we look at the super-ship I think we must recognize also that in addition to its depth requirements there are limitations to its use. The general hand-waving idea that ships are getting bigger and therefore cargoes will fill these ships, we believe from our viewpoint, is erroneous. Erroneous because it ignores the economics of the steamship business.

There is much mystic about the steamship business. Some of it we are still trying to learn. We have learned a few things about it, though, and the things that are applicable here we think are that super-ships are applicable only in point-to-point movements. They are not the future trampers of the world, for several reasons.

First, there will not be the channels to accommodate them, not only in this country, but overseas.

Secondly, it takes a lot of cargo to fill a super-ship. Again, my definition of 50 foot channel depth or more. There are limited numbers of commodities that can move in those kind of volumes. I suggest that there is any relationship between containerships, for example, and super-ships, I think belies the understanding of what goes on in the navigation industry.

I say this because it ignores the requirements of the ship for frequency of service. He is not willing to put his cargo on the dock and let it sit there for a month while we accumulate it to a super-ship size load. He wants frequent service.

It also ignores the volume of trade that exists in these various trans-Pacific, trans-Atlantic and other trade territories. So I think we have to limit our thinking then to the kind of cargoes that do belong in super-ships and these are relatively few. They are basically commodities that exist in one area and in large quantity and are destined to move to another area and extremely large and continuous volume. Such items as petroleum, for example. The Japanese have used the super-ship idea to a great extent because they have a large volume of petroleum in

the Middle East that they have to move to their ports, And on a continuing basis. The movements to Bantry Bay are likewise significant in this way.

It is also feasible to use super-ships for the handling of ores and coal. This is being considered off the East Coast at the present time again because you have large volumes moving from fixed points to other fixed points.

It is quite feasible that this requirement may be needed in the Bay. Whether the ships are then called directly or if it should call it a redistribution point, such as has been suggested by BCDC, and their presentation that was just read, or if this transfer point should be offshore, it should be studied. We think then that the proper scope of this study is to limit it to the super-ship. We see no real advantage at all between the super-ship problem and some of the things that are included in this call for the study.

I commented on the lack of relevance for example to the container cargo. The references in the resolution to the intermodal travel limited to the super-ship requirement we concur. But to talk beyond that in terms of container terminals, we fail to see the relevance. There has been a suggestion or an implication at least that once we are doing this study we ought to continue on, why stop there, let's cover the whole field and we watch the scope of this thing grow beyond all bounds that anybody can believe. I thought it was pretty broad in the resolution and I've sat here tonight and heard suggestions that you go far beyond even that. Well, why not ? Why stop here ? There are several reasons.

Perhaps the most important reason from our viewpoint is that historically there has been a Federal-local relationship that has existed, the Federal portion being administered by the Corps of Engineers for the Congress, the local relationships being handled by port authorities, state prople and organizations at the state level or below. Suddenly we find a complete upheaval of this relationship, for some reason, an invitation to the Federal government to step into the area of local concern and we have to question why. What do they propose to do ?

We feel that if there are any deficiencies at the local level, again I define local as being state or below, that the responsibility to correct those deficiencies are at that level. If the Port of Sacramento-Yolo Port District is not doing an adequate job, the people of this district have the power and the wherewithall to see that we do. If there is a need for any kind of regional organization, the State of California has the authority and the resources and the ability to undertake the necessary work as they have done. They have authorized BCDC, for example. We think that's where the responsibility should rest. To go beyond that is to destroy this Federal-local relationship that has worked quite satisfactorily and we see no reason to destroy it.

Second reason, that we say that there should be a reasonable limit to the scope of the study, to draw some reasonable boundary about it, is that of the cost. Now, in the Federal scope the four and a half million dollars proposed here is not large. But it is not four and a half million dollars times one, the San Francisco Bay. I think we have to be realistic that already there are discussions and indications of

additional studies in southern California, in the Northwest and most recently one suggested in Alaska. So we have now four and a half million dollars times four and I'm sure from the discussions I've had and heard it will be many times more than that because there were other regions of the country that are looking at the same kind of things where perhaps they must be justified. I don't know their particular situation.

This amount of money does become significant, then, especially when we find that it's come out of allocations for functions of the Army where there is already a crying need for additional channel deepening for less than the 50 foot. In other words, for the 35-40 foot depth channels and where there is a shortage of funds because of Congressional cutbacks. We feel that to put the money into this kind of a broad scope project is unreasonable, that if the scope is brought down to the limits we have suggested, that of the super-ship, that the cost can be kept in line with the benefits of the study. And to go beyond is a false investment of Federal funds.

We feel, also, that there is a new pattern, as I have somewhat alluded to before, and that the Federal government has been responsive to the local request. Many times in discussions with Corps of Engineers personnel I have -- it has been pointed out to me that the Corps does not initiate projects. It does that which is asked for locally through the Congress. The Corps then performs and I'm sure that that's the point that you, Colonel, have made earlier about the study itself. It's been requested by Congress. But you now are asked to report back to the Congress on the scope of the study and your proposed method of approach.

We think that the only possible excuse for the expansion of the scope of this study is to reverse the pattern and no longer have the Federal government become responsive to local requests, but rather for the Federal government to end up in some form or other dictating to the local interests what they should do.

And in this respect we are much concerned with some of the language in this resolution. I'm speaking now of the Congressional resolution. And I'll mention just a few of the areas of concern, the rest of them are enumerated in the paper that I've left.

Presentation of guidelines for regional development to the extent required by navigation uses and potentials. Now perhaps I'm using my imagination too much, but I don't know what that can mean short of the Corps of Engineers suggesting that there be some form of regional port authority. I don't think I'm being overly sensitive when I suggest that that's what this language means. If I am, I hope you'll correct me. But it does carry that implication to us and I would point out to you, Colonel, this sort of thing has been discussed at the state level, has been through the legislature in the past, and has been thoroughly studied and has been killed at that time. And if it is needed at this time the State can well reorganize its forces and bring it about. Why then should the Corps of Engineers or the Federal government come into the picture at all ?

We are particularly concerned about language such as recommendations for improvements in harbor and industrial operations and developments through improved coordination and programming, including solicitation,

market research, public relations, advertising and long-term planning. Now, if that isn't port operations, I don't know what is. In all of its facets. And we feel that the ports around the San Francisco Bay have done a quite adequate job in this area. And if they have not, again the responsibility rests upon the local people to do something about it.

We don't believe that the Federal government is in a position to suggest how best to handle the public relations activities of the port. Nor are they in a position to suggest how to best handle the advertising of the port. These are matters of local concern, we submit.

To sum up, then, and in conclusion, we feel that the needs of the super-ships definitely have to be investigated, for the economic well-being of this country. We are as equally concerned with others who have expressed the idea that perhaps we are driving some of our industry away because we have not handled this problem at all.

We think it may be feasible to proceed on the San Francisco Bay In-Depth Study as proposed here in all of its ramifications, environment, ecology, and all the rest of it, limited to the area of super-ships. We think that at some point in time consideration should be given to an off-shore cargo transfer and redistribution facility. And we further submit that all other areas of consideration, namely anything to do with channels of less than 50 foot depths should be eliminated from this study and study as the needs require, which has been the practice all along and worked quite satisfactorily.

This is not fragmentation because each time that particular project is related to the whole, come up with any kind of master plan, channel

depths cannot help but raise chaos in the entire navigation interests around this bay. I can assure you, Colonel, that we will cooperate with the Corps in any way that we can and finally we submit despite the fact that we heartily oppose the idea of this study, engaging in anything less than 50 feet, if there is a feeling on the part of Congress that it must be done we hope you will do it and none of the other agencies that might be seeking to do it.

Statement of Robert H. Langner, Executive Secretary, California Marine Affairs Council

...My earlier testimony I referred to the origin or genesis of this study, and the slow realization by many that it perhaps offered a new and different and perhaps even a breakthrough approach to areas of study and areas where data was lacking where it was never before possible. Earlier I also cited the parallel and emerging realization at the Federal level. Mr. Shore has referred to the possible Federal approach to matters such as super-ship and I can say from personal experience with certain members of the Congress, certain Congressional committees concerned with navigation and appropriation and civil works, certainly the budget, they are aware with the problem of unlimited channel expectation and the super-ship. As a matter of fact, I would say Mr. Shore's reference to a 50-foot breakpoint was almost too shallow when you consider the size of these vessels which are emerging operational and as I earlier testified to in terms of number. Also, I think it is important to recall again the parallel, the super-size ships are only an instrument of transportation and they are perhaps necessary and going into production and -- in the United States because of our insatiable demand for low-cost transportation on bulk commodities and fuels and research into these needs, both regional, nationally, and security aspects, projects of such growth are to my knowledge largely lacking, as I earlier testified, and cited the Haley report as the last major Federal undertaking in ten -- twenty years ago in this area.

And the social employment effects of industry related to water transportation was also earlier referred to. Mr. Gordon Finley's comments

I think were applicable and very appropriate in this course and Mr. Morford, Mr. Morrow referred to three and a half to five man days of recreational benefits in the Delta and I think it is important to recall that the basis for people to have the opportunity for recreation, to have the boats and the cameras and the water skis and all the rest ultimately stems from economic basics of industry and in low cost materials.

Mr. Morrow of ABAG's comments were applicable to some extent also in this regard, especially as to results which might be hoped for in the study. I think that the resolution in part pretty directly points to the areas where data is sought. Perhaps one aspect which was more evident tonight in the testimony, some very excellent testimony given, is the impact of world commerce. Either nationally or in this case of the study - the impact on our region, the hinterlands served by this Golden Gate complex, navigational channels and basins. What is the impact of trade ? Today what has it been and more importantly what will it be in the future ?

All the variables have been referred to, changes in technology and marine sciences, growth of population and the planning that is being done in other areas. Surprising how little we know about our waterborne commerce as a locational factor, as a producer of employment, as a multiplier in economic context.

I would suggest that we have a very major void in this area and perhaps more than anything else, including the super-ship, but this area is the prime target of the In-Depth Study. Such investigation seems to me as beyond the scope of any present local, regional, state

agency, and perhaps in a sense is even beyond the competence of the Federal government. Whether this is to be proven, perhaps in this study. I would echo Mr. Shore's reference that if such a study is to be accomplished we would like the Corps to do it and that Congress has already made that decision for us. So it is a responsibility not only best, but can only be carried forward at the Federal level in terms of the magnitude of the undertaking. Ellwood Ehlers, State Department of Navigation and Ocean Development referred to planning and his reference to the business and transportation agency and the increasing state involvement in planning and transportation facilities and the locational factors of industry. He also referred, as did other witnesses, to the origin and destination of cargoes and the technological impacts. This refers to, I think, in a sense the matrix concept that economists are more and more using, the push-pull concept in economic analysis which lends itself to computer analysis and we have not, to my knowledge, used this technique to any great extent any place in the United States. It's been very skimpily applied to analysis of commerce generally.

I think we have an opportunity here now and I believe it is envisioned in your projected study, that this technique could be used and perhaps pioneered for productive purposes. Data, though, that can be obtained from a study can have negative effects in a sense as well as positive fallouts. In planning our future needs; by helping us to avoid irrevocable mistakes in planning; commitment of lands and facilities and capital which are either possible to rectify or can be rectified only very expensively because they turn out to be marginally efficient.

I'm no expert on port planning and perhaps one of the port officials can better comment on this, but an example that occurs to me, because I work next to it and I have for a number of years, is the finger piers in San Francisco, the miles and miles of finger piers which were designed back, I guess late in the last century, and were -- in the case of the latter construction of these were already outdated with the advent of motor transportation replacing the railroad movement of cargoes and these were constructed and I think it is safe to say that we are still paying the price of such design three quarters of a century later because maybe the techniques of analyzing of what was going to happen to transportation were lacking then.

It is hard to believe now, but mistakes can be made. Back to the positive side, the wording of the beginning of the resolution refers, as you read earlier, Colonel, to promoting and encouraging efficient, economic and logical development of the harbor complex and its hinterlands, and I take those as fairly obvious, and not too controversial statement of intention.

The data and information, projections obtained from the study along with those from the earlier Bay study, the demographic projections, the 20-20 report, the Bay Model and Triple S Study and others referred by you, produced by the Corps, and alliance with the Department of Commerce and others should provide much of the rational basis for stating our needs and our goals, for our water commerce and its allied shore site industry and development. And along with this and implicit in the resolution and implicit, I think, in the study is a statement of

perhaps the best methods or alternatives for achieving these solutions. The results of such an effort, we hope for could provide the basis, foundation for much of our future planning, just as the past studies already are doing so as referred to by some of the earlier witnesses.

This for the Federal government, of course, this is something that could provide the information upon which to base specific channel dimension studies carried on -- its constitutional responsibility for navigational access and for national security Federal acts, as I understand it, is being developed; new criteria are being put forward, being finalized, and the Water Resources Council and others that broaden the basis for analyzing these projects. And as I understand it, these are four, there's the national economy or the national economic posture on any -- effects on any of the project and then the effects of regional development. Third, the effects of environment or on environment and finally and certainly not least, the well-being of the people, the quality of living is another phrase.

This, of course, is referred to in the employment aspects and job generation and so forth. With the type of information that's envisioned in the In-Depth Study perhaps relative weights to these four emerging criteria factors can be assigned. Planning for the sake of planning has been -- is a phrase often heard. It is a descriptive criticism which are studies which proceed very far beyond the mere physical engineering and allied studies and it is a very valid one. Certainly we have heard a lot about studies tonight. All of us in the Bay Region are perhaps surface for studies and sometimes they appear to be studies for the sake

of study. But I think it would be far from the truth to state that most of all major problems on the -- wouldn't be safe to state all of most major problems that we have today, that we refer to in the press daily, problems of urban sprawl and slums and pollution and general misuse of our resources, that in retrospect of these could have been limited, modified, ameliorated or perhaps even never have occurred at all had we had the knowledge and applied it in comprehensive planning. And in appropriate planning and this sometimes of course does go beyond engineering and physical planning into other aspects, economic and -- I certainly don't mean to imply that we have developed a technique to answer all of man's problems or the problems of the urban scene today, and we could suddenly correct all these past errors. In fact, the implication of the study itself is to develop the methodology and develop the techniques and it is going to be part, -- I guess part of one of the major values that we can attribute to be on a national basis. To us this is a pilot or a test, whether this can be done satisfactorily and efficiently, and in regards to the cost of four million, five million, six million dollars, if it has an input and can contribute ultimately to the national welfare as well as to regional growth and solving the regional problems, it would be a fine investment.

More as a suggestion, that such plan be limited to the effects of this -- the effects of this study be limited. The need for an authority and even the intentions of agencies at the state and local levels exists for planning is being carried out. And I'm sure that as we heard tonight from the various organizations, BCDC's filed statement and the ABAG

comments and others of the State agencies, that they look forward to this information. I think it is also fortunate in this study, it is proceeding simultaneously with the Triple S Delta Water Quality Study. The two certainly have interrelationships and I think it probably -- it is more economical and efficient that these two studies, which do have this interphase, be conducted simultaneously and by the Corps of Engineers.

It is also noted that you at an earlier hearing indicated that this study will have interim reports made and that you would expect only -- not only a participation of all the regional interests as has been volunteered here this evening and at the earlier hearings, that there will be information being produced, that the fear that study would go into limbo and produce a result perhaps five or ten years from now which we already dated and limited application, that this is not necessarily the case, that there will be periodic and partial reports given as has been the case with the Bay studies, certainly.

I think it is also important that this offers opportunity, I guess, for the first time, a comprehensive basis, as you indicated, participation of the Department of Transportation of the United States Government, and the U.S. Department of Commerce, which have collaborated before in the demographic projections, but also many other Federal agencies.

The interim projected plan of study itself indicates that there is a dozen or more Federal agencies that have been consulted and plan to participate. It is unique then in presenting this opportunity for

us to obtain the maximum Federal expertise and input.

Mr. Morrow of ABAG, I think, suggested that similar state agency participation could be forthcoming as well as the regional agencies and others have indicated that such participation from the state would be forthcoming. Also, it is important, I think, to realize that as you fully know, that the earlier hearings referred to as contained in this volume which I attended some and many others have showed a great interest and almost without exception enthusiasm and agreement that there was information, data, that these various public and private organizations could put into the study and that they could apply in their own responsibilities, both public and private, in planning and making more efficient their operations and certainly at no time, at least in recent history, has it been more necessary for the United States, and our area included, to look at our relative efficiency in the international interphase of foreign water transportation and international trade and this study does offer the opportunity, I think, it seems to me, to perhaps improve these efficiencies to more rationally approach our problems of an input from a variety of Federal, state, regional, and local agencies into a common problem area and finally that although we are enthusiastic, as indicated in my testimony, we are -- there are undoubtedly areas, and some have been referred to, advertising and other things, which perhaps should not be in the study and certainly I'm sure that you will give weight to these comments which have been made by public ports and others, but this is not to say that -- that the enthusiasm has been testified to and shown and the expectations of output show that there is widespread support and

indicated need for the type of information as referred to in the resolution and in the proposed study.

Statement of Harold Gregg, Executive Director, Marin Conservation League

...We note that your office will be undertaking a comprehensive study of shipping and port development in San Francisco Bay with relation to economic and industrial development in San Francisco Bay with relation to economic and industrial development in this region and the nation. If such a study is made, we urge that primary emphasis be given to environment values. The anticipated economic effects of future port development, including air and railroad terminals, must be considered, we believe, in relation to maintaining acceptable environmental standards.

We were gratified to note in news releases the changes in Corps of Engineers regulations requiring that greater emphasis be given to environmental values in considering permit applications. This seems to be an important step in the right direction.

Statement of Mrs. Clark Kerr, Vice-President, Save San Francisco Bay Association

The Save San Francisco Bay Association with 22,000 members opposes the commitment of a large amount of Federal funds to make the proposed pilot study of the San Francisco Bay area to illustrate the importance and problems of shipping in the United States.

Each bay and estuarine system in the United States is somewhat unique but the San Francisco Bay varies importantly from all others. For three years, the San Francisco Bay and Conservation Commission, funded by the State of California, made studies of the characteristics of the Bay. The information available in these studies strongly indicates that this Bay would be a most unsuitable pilot area.

A planning study of this scope at this time is not needed for the BAy Area and, in our opinion, is not the responsibility of the Corps. It appears evident that the only industry to benefit from deep-draft vessels would be the refineries. Whether the Bay should be used for super oil tankers is a question which should be resolved by state or regional planners and not the Corps. The "land-bridge" (and use of container ships) is already successfully being developed by the principal ports of San Francisco, Oakland, Richmond, and Stockton with vessels of smaller size.

I-D STATEMENTS FROM STATE AND LOCAL AGENCIES SUBMITTED PRIOR AND SUBSEQUENT TO PUBLIC HEARINGS

NORMAN B. LIVERMORE, JR.
SECRETARY

RONALD REAGAN
GOVERNOR OF
CALIFORNIA

OFFICE OF THE SECRETARY
RESOURCES BUILDING
1416 NINTH STREET
95814

Department of Conservation
Department of Fish and Game
Department of Harbors and Watercraft
Department of Parks and Recreation
Department of Water Resources

Air Resources Board
Colorado River Board
State Lands Commission
Office of Nuclear Energy
State Reclamation Board
Regional Water Quality Control Boards
State Water Resources Control Board

THE RESOURCES AGENCY OF CALIFORNIA

SACRAMENTO, CALIFORNIA

Frank G. Boerger, Colonel
District Engineer
U. S. Army Corps of Engineers
San Francisco District
100 McAllister Street
San Francisco, California 94102

Dear Sir:

Preliminary Plan, San Francisco
Bay Area In-Depth Study Report

Your plan of study as covered in the above indicated report dated February 1965 is of considerable interest to the State of California. This Agency notes with approval that your plan for an in-depth study encompassing the San Francisco Bay Region would provide a means of bringing into focus the interests and concerns of several State agencies in respect to the matters and elements to be studied.

Copies of your report were, accordingly, made available to the following State agencies for review and comment:

Department of Harbors and Watercraft
Department of Parks and Recreation
State Water Resources Control Board
San Francisco Bay Regional WQC Board
Department of Fish and Game
Department of Water Resources
State Reclamation Board
Department of Public Health
Department of Conservation
Division of Highways
Division of Bay Toll Crossings
State Lands Division
San Francisco Bay Conservation
and Development Commission

The Department of Harbors and Watercraft, although more particularly interested in facilities for, and activities of, light draft vessels, states that it has a definite interest in the various elements proposed to be studied in this extensive and comprehensive undertaking. This Department is being more and more oriented toward the administration of a comprehensive plan for the development and utilization of the ocean resources of the State. The Department expresses a continuing interest in the study and will be interested in participating in all matters and elements thereof appertaining to ocean-oriented activities.

Frank C. Boerger, Colonel
U. S. Army Corps of Engineers
San Francisco Bay Area In-Depth Study

The Department of Water Resources expressed a continuing interest in the study, and recommends that sufficient geologic studies be made to determine the location of water-bearing deposits which could be endangered by the deepening of the channels. This should be followed by a water quality analysis of any existing underlying fresh water aquifers which might be affected by the excavation. If channel work is done in these areas, a water quality analysis should again be made to determine if any aquifers have been intruded, and to what extent.

The State Reclamation Board, although not directly concerned in the study, observes that the continuing growth of the Bay Area dictates that a comprehensive analysis be made of shipping problems, adequacy of facilities, delays in intermodal transfers, channel dimensions, storage locations, and capacities, and other physical aspects affecting Golden Gate waterfront commerce.

The major portion of the navigable waterways in the Bay Region are lands under the direct jurisdiction of the State Lands Commission or constitute waterways wherein the Commission exercises a trust jurisdiction on behalf of the citizens of this State for the purposes of commerce, navigation and fishing. The State Lands Division has been conducting studies of detailed portions of the entire San Francisco Bay Area for many years as a part of its leasing and other land-management operations on the ungranted tidelands and submerged lands of the State. The use-planning functions of this Division's responsibilities require reviews of the uses proposed for lands within and adjacent to the Bay and all its tributaries.

The logical development of the harbor complex for commercial purposes to serve national and international commerce must be integrated with other, sometimes conflicting, uses of the tidelands and adjacent coastal areas. The Land Use Planning functions of the State Lands Commission take such various possible uses into account in determining the permitted uses of the State-owned lands within the navigable waterways, insofar as such uses are not in conflict with the paramount Federal control for navigation and the public navigational servitude.

The State Lands Division observes, also, that this study would provide a means for its further coordination with other State agencies, as well as with all Federal agencies involved, in furtherance of the accomplishment of its submerged and shoreside land management objectives in the area.

The Division of Highways of the Department of Public Works states that the proposed work does not appear to conflict with State highway planning activities. Furthermore, the proposed study appears to be a tying together of regional planning from the viewpoint of development of the harbor. To this end, it would appear that highway planning activities would be enhanced for routes near the shore of the Bay.

Frank C. Boerger, Colonel
U. S. Army Corps of Engineers
San Francisco Bay Area In-Depth Study

The Department of Fish and Game by memorandum dated June 11, 1969, and the State Water Resources Control Board by memorandum dated June 16, 1969, have commented in some detail on this proposed In-Depth Study, a copy of which comments are attached hereto and are to be considered as a part of this letter.

No doubt, all the other above listed State agencies as well as others not listed, will be interested in your study, and the Resources Agency will not only follow the study with interest, but will endeavor to render whatever assistance requested.

Sincerely yours,

Assistant Secretary for Resources

cc: Department of Harbors and Watercraft
Department of Parks and Recreation
State Water Resources Control Board
San Francisco Bay Regional WQC Board
Department of Fish and Game
Department of Water Resources
State Reclamation Board
Department of Public Health
Department of Conservation
Division of Highways
Division of Bay Toll Crossings
State Lands Division
San Francisco Bay Conservation
and Development Commission

State of California

THE RESOURCES AGENCY

Memorandum

To : Department of Harbors and Watercraft
1416 Ninth Street, Room 1336
Sacramento

Date : JUN 16 1969

From : STATE WATER RESOURCES CONTROL BOARD

Subject: Review of Preliminary Plan of Study of USCE San Francisco Bay Area In-Depth Study Dated February 1969 and March 1969

The State Water Resources Control Board and the San Francisco Bay Regional Water Quality Control Board have reviewed the subject report.

Our general comment about subject report is that it appears to place too much emphasis on the development of basic data and on the analysis of problems which have already been defined, and to which various agencies, including the Regional Board, have urged solutions. Therefore, we would recommend that more emphasis be placed on the development and evaluation of practical solutions. Our interests are primarily with the section on "environmental and ecological studies" beginning on Page 9 of the report.

Your attention is called to the January 6, 1969, State Board letter commenting on the "Notice of Initiation of Investigation" in which the Corps of Engineers was requested to study means for controlling the discharge of sewage and other wastes from vessels. We failed to find this proposed study in the report. Reference was also made in the letter to this Regional Board's resolution regarding dredging operations. Again we did not find that the Corps proposed to develop practical modifications in present dredging and dredge spoil disposal practices and/or investigate the feasibility of ocean disposal of dredge spoils.

Another problem which we feel requires solution is presented as an item for further analysis on Page 13 of the subject report: this is the matter of handling and movement of hazardous cargo. It is our opinion that the problems created by "accidental" spills and their relationship to water pollution are already adequately defined and do not require further analysis. A feasible solution to prevent these problems should be evaluated and recommended. It is suggested that the Corps evaluate and recommend improved loading and unloading techniques and facilities

to minimize the chance of spills. These facilities could include centrally located tanker terminals surrounded by locks to contain spills which could occur during loading or unloading. Traffic control of vessels in channels carrying cargos hazardous from the standpoint of water pollution should be studied and systems for accomplishing this developed.

In summary we wish to reiterate the need for developing practical solutions to problems which have been recognized as needing correction.

Jerome B. Gilbert
Executive Officer

cc: San Francisco Bay Reg. WQC Board
Division of Water Rights

State of California

The Resources Agency

Memorandum

To : Mr. E. A. Curtis, Chief
Division of Boating Facilities
and Waterways Development
Department of Harbors and Watercraft
1416 Ninth Street, Room 1336
Sacramento, California

Date: June 9, 1969

From : Department of Fish and Game

Subject: U. S. Corps of Engineers, San Francisco Bay Area In-Depth Study.

These are our comments on subject report as requested in your memo of April 11, 1969.

The fish and wildlife resources dependent on San Francisco Bay are possibly the most important group in the state. Any study of the magnitude proposed by the Corps can result in future actions that are either beneficial or detrimental to fish and wildlife and their utilization. Therefore, we believe close liaison and working relationships are imperative between the Corps and our department during the "prospectus" formulation in 1969-70 and the actual three-year study that follows.

We understand the Corps has three main questions they would like answered by interested parties regarding the proposed study.

1) An estimate of the information or types of information our department can provide.

2) A list of pertinent studies, published or underway.

3) Additional studies that will be required; including,

   a) Estimated time of completion of study.

   b) Cost of study (Corps of Engineers may be able to provide funding assistance).

Our answers to those questions follow.

1) Our department can provide information on the locations, relative abundance and human uses of the fish and wildlife resources dependent upon San Francisco Bay. The amount and detail of this information varies for different species: we know much about some and little about others. We have varying information on some of the water quality and other environmental requirements of those resources.

2) Pertinent studies and reports by our department, completed or underway, are:

a) Report titled "Fish and Wildlife Resources of San Francisco Bay and Delta: Description, Environmental Requirements, Problems, Opportunities and the Future"; the result of an 8-month study conducted in 1967-68 for the State Bay-Delta Water Quality Control Program.

b) Several reports prepared during the last six years by the Department's Delta Fish and Wildlife Protection Study which is conducting biological studies in the Sacramento-San Joaquin Delta, and parts of San Francisco Bay.

c) "Preliminary Fish and Wildlife Plan for San Francisco Bay-Estuary" - a report prepared in 1966 by our department for the San Francisco Bay Conservation and Development Commission.

d) "An Historical Review of the Fish and Wildlife Resources of the San Francisco Bay Area" - a department report of June 1962 by John E. Skinner.

e) The "California Protected Waterway Program", just beginning as a result of legislation passed in 1968. That legislation requires the State Resources Agency to "develop a plan for the conservation of waterways of the state possessed of extraordinary scenic, fishery, wildlife or outdoor recreation values". The plan is to be completed by January 1971. San Francisco Bay and the Delta will be included in this program.

f) Several miscellaneous publications or reports of fish and wildlife investigations in San Francisco Bay.

3) We are pleased to see that the Corps has included fish and wildlife (ecological) studies in their program. In fact, the general study outline on page 10 can be construed to include practically every aspect with which we would be concerned. However, because details are not identified and in the interest of being helpful, we are including specific comments for three studies essential for complete planning.

a) Waste disposal from ships. The program should include studies of methods and facilities to transfer domestic (perhaps other) sewage from ships to shore treatment facilities. No such facilities exist and none are planned in the near future. Currently, ships flush raw sewage routinely into the bay, contributing to the widespread contamination of shellfish and the resulting prohibition of their harvest. Other water-contact uses are also threatened by this practice because shipping and port forecasts indicate increased use.

b) Magnitude and impact of filling by tidal circulation. There is evidence that the north shore of San Pablo Bay is extending into the bay at a rate approaching 100 feet annually. In the last ten years, the salt marsh paralleling Highway 37 has widened by about 1,000 feet. Comparison of depth soundings several years ago with today's conditions adjacent to the dike at Mare Island, indicates a strong probability that San Pablo Bay is decreasing in surface area and depth. Details of this trend are not known. Considering the many uses and values dependent upon San Pablo Bay, plus the possibility of similiar happenings elsewhere, we believe a thorough baywide engineering study of this subject is required.

c) Biological effects of dredging and spoil disposal. Study (b), above, is related to dredging and spoil disposal, but (b) is of special significance and primarily an engineering project, hence the separation.

All indications are that shipping and its associated dredging and spoil disposal activities will continue indefinitely and probably increase. This means we need to: first, understand what dredging and spoil disposal do to natural resources; and second, be able to recommend, quantitatively, specific conditions, waste discharge requirements, and other regulations for future operations.

The Federal Bureau of Sport Fisheries and Wildlife is just completing a two-year study to "determine the effects on marine life caused by increased dredging and spoil disposal for the Stockton-Navigation Channel in San Francisco and San Pablo Bays". Certainly the results of that study should be analyzed to determine what questions, if any, have not been answered and thus what remains to be done. At the same time we believe it is appropriate to specify now what we need to know in relation to the Bay Area In-Depth Study.

A study is needed to learn:

(1) What has been done on this entire subject elsewhere; i.e., a competent review of previous related studies. However, this is so basic that we assume it will be done in conjunction with the other tasks.

(2) What turbidity concentrations of different bay sediments:

(a) Abrade the gills of young and adult fishes (several species) to the extent of killing or seriously injuring them? What levels result in avoidance reactions?

(b) Smother and destroy eggs of fish that spawn in the bay? Some species such as herring, spawn in specific areas during a few months. Any problems of egg survival might be solved by prohibiting certain turbidity levels in such areas at specific times.

(c) Prohibit or reduce growth of aquatic plants?

(d) Prohibit or impair the feeding activities of diving ducks during the winter months?

(e) Eliminate or limit recreational fishing success?

(f) Smother and destroy or otherwise inhibit development of the natural ecologic assemblage of benthic organisms indigenous to San Francisco Bay (including benthos of the tideflats).

(3) The rates of reestablishment of different benthos in different sediments in dredged areas, spoil disposal areas and adjacent areas.

(4) The location and magnitude of different bay sediments, the different dredging methods, turbidities caused by different dredging techniques in different sediments, and projections of future dredging locations, amounts to be dredged, and time schedules.

The biological and engineering tasks required to complete the study are:

Biological

(a) Determine through substrata analysis the various levels of biological productivity for the different bottom sediments.

(b) Identify reestablishment rates for different benthos in dredged areas, spoil disposal areas, and adjacent areas, including tideflats. These data would be related to sediment types.

(c) Identify turbidity levels that affect angler success and the feeding activities of diving ducks.

(d) Aquaria and bioassay laboratory studies to identify turbidity levels that result in the most probable problems - fish and egg mortality, fish avoidance reactions, impairment of aquatic plant growth and benthos mortalities. Also "pumping rates" of shellfish vary with the amount of suspended solids and subsequently affect the well-being of shellfish. Suspended solids would be related to the production and sustenance of important shellfish species

Engineering

(a) Identify and categorize the bottom sediments (i.e., sand, clay, silt, shells, etc.) in the bay and locate them as to area and volume.

(b) Determine the kinds and amounts of suspended material in the bay, and deposition amounts and rates under field conditions.

(c) Identify the different dredging methods and practices. The location and magnitude of effort by each method should be determined. Project future locations and trends for the various methods. This will reveal what sediments, where and to what degree will be involved in future dredging operations. It will then be possible to choose specific sediments with which to begin biological field and laboratory studies.

(d) Determine turbidity levels and sedimentation rates over given time periods caused by different dredging methods in different sediments.

Based on the findings of all tasks, recommendations would be developed for waste discharge requirements, and other regulations for dredging and spoil disposal projects that would protect fish and wildlife and their related uses.

The study described would require at least three years to complete, with additional time to prepare the final report. Concurrent field and laboratory studies by two teams of biologists would be required. Considering salaries, equipment and other expenses, our cost estimate is $200,000 each year. A three-year authorization would amount to $500,000 to $600,000.

E. C. Fullerton

FOR
Director

cc Region 3
Region 2
Marine Resources Operations, T.I.
Wildlife Management Branch
Water Projects Branch

STATE OF CALIFORNIA—RESOURCES AGENCY RONALD REAGAN, Governor

DEPARTMENT OF FISH AND GAME
1416 NINTH STREET
SACRAMENTO, CALIFORNIA 95814
G. Ray Arnett, Director

June 23, 1970

Colonel Charles R. Roberts
U. S. Army Corps of Engineers
San Francisco District
100 McAllister Street
San Francisco, California 94102

Thank you, Colonel Roberts---

---for the opportunity to comment on the water-borne commerce and harbor development phase of the Corps of Engineers' San Francisco Bay In-Depth Study. We appreciate your invitation to participate in public hearings relating to the Study and note that you wish to hear from groups and individuals who are primarily concerned with the conservation of fish and wildlife in the Bay.

We are much concerned about the scope and tone of the Resolution which authorizes this Study. The investigation has as its objective the promoting and encouraging of an expanded harbor complex for the benefit of water-borne commerce and industry. No mention is made of the possible impact on fish and wildlife resources and recreation.

San Francisco Bay is one of the largest harbor complexes in the world. It also provides many hours of recreation to thousands of people each year. Also, the Bay is an important home for millions of birds, fish, crustaceans, mollusks and other marine life. Can this vast wildlife resource adapt to the sudden, and at times violent, environmental changes brought about by man in the guise of economic progress? In-depth studies such as yours will provide valuable information on the future of the Bay Estuary. The entire Bay system must be considered. This includes not only the commercial development of the Bay but also the subsequent effects that this development will have on the fish and wildlife resources.

Improvement and redevelopment of water-borne commerce in the Bay will necessitate the removal of large quantities of bottom material from the harbors and various shipping channels. Although the effects of a long-term bay-wide dredging operation upon water quality, turbidity, sediment deposition and fish and wildlife are profound, they are not precisely known. Because of the impact on the Bay ecology, it is imperative that the resulting effects from a project of this nature be thoroughly investigated prior to any authorized work.

Colonel Charles R. Roberts June 23, 1970

We, therefore, suggest the following problem areas be included in your Study:

1. What are the effects of dredging and turbidity to the spawning process of fish, shellfish and crustaceans?

2. What effect does dredging and turbidity have on the food chains of aquatic organisms including birds, fish, mollusks and crustaceans?

3. What time of the year are the effects from dredging and spoil disposal the least detrimental to Bay fisheries?

4. What effect does spoil disposal have on anadromous fish runs?

5. How much angling opportunity time will be lost from dredging activities to the sport and commercial fishermen?

6. What effect will spoil disposal have on the distribution of fish in the Bay?

7. Where are the dredging spoils going to be deposited?

8. What will be the frequency of maintenance dredging and location of maintenance spoil disposal?

9. What will be the change in Bay currents and siltation patterns?

10. What is the feasibility of curtailing all spoil disposal inside the Bay and transferring the spoil to the Gulf of the Farallones or land disposal to existing dry land areas?

These questions must be adequately answered before any large-scale dredging project is approved.

The Department of Fish and Game will be available to assist you in formulating plans and recommendations for the protection and preservation of fish and wildlife in San Francisco Bay Area. Please contact Willard Greenwald, Regional Manager of our San Francisco office, for any assistance (telephone number 557-0411).

Sincerely,

L. H. Lloyd

Director

STATE OF CALIFORNIA—HUMAN RELATIONS AGENCY

RONALD REAGAN, Governor

DEPARTMENT OF PUBLIC HEALTH
ERKELEY WAY
LEY 94704

May 27, 1970

Charles R. Roberts
Colonel, CE
U. S. Army Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Thank you for your invitation to express our views relative to the proposed in depth study of the San Francisco Bay area and its tributaries.

As reported to your predecessor Colonel Frank C. Berger in our communication of March 25, 1969, the California State Department as well as Local and Federal health agencies have broad interests and responsibilities in the water quality of the San Francisco Bay area and Delta. These agencies are particularly concerned with domestic water supply at Antioch, Mallard Slough, and other points up stream in the Delta; shellfish, both sports and potential commercial; recreation, including boating, fishing, and water contact sports; and sanitation in Marinas.

Many programs and planning activities at all levels of government are being conducted or developed throughout the Bay system without comprehensive information on existing conditions in the Bay and Delta areas. Of specific interest to health authorities is the bacteriological quality of the waters in question, particularly those waters which are (or maybe) used for domestic water supply, recreation, or shellfish cultivation. Other authorities have other areas of interest, but there is a general paucity of current data on which to make evaluations and base decisions.

Many studies have been conducted to develop information at one particular time or place, however, the data rapidly became obsolete with changing conditions.

Charles R. Roberts
Colonel, CE

May 27, 1970

There is need for a flexible data gathering program, perhaps commencing as a bacteriological program and extending when the demand arises to include other factors. Such a program would increase efficiency of water quality related activities at all levels of government, fill areas where data is needed but not available under present programs, reduce overlap on data collection, and provide current information on water quality.

The objective of the proposed program would be to develop and institute a multi-purpose data gathering operation which would provide information whereby current waste discharges, human and natural activities and other factors can be related to water quality.

Initially, emphasis may be given to the bacteriology of the Bay and Delta waters.

Please accept this letter as a statement of our interest and concern and make it part of your record.

Very truly yours,

Henry J. Ongerth
PCW

Henry J. Ongerth, Chief
Bureau of Sanitary Engineering

HJO:gm

BENICIA PORT TERMINAL COMPANY
P.O. Box 315
Benicia, California 94510
Telephone 707—745-2394

San Francisco Office, 311 California Street
San Francisco, California 94104 Phone: 415—392-2365

June 24, 1970

Col. Charles R. Roberts
District Engineer
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Col. Roberts:

The undersigned appreciated the opportunity to attend two sessions of the recent series of In-Depth Studies of San Francisco Bay conducted by your office.

In the course of the proceedings, this question was asked on several occasions: "What is your priority?" You invited interested parties to dispatch written communications to be considered as input for your final report to the Committee on Public Works.

We are of course fully cognizant of the varied scope of the study, but in the spirit of the direct question, we wish to respond with a direct answer. There is an immediate and critical need of:

DEEP DRAFT NAVIGATIONAL CHANNELS

This is not to ignore the other important aspects of the study; however, from the standpoint of priority, the development of adequate channels would be of ranking importance. Also, we feel the subject would take top priority with our neighbors in this region and those up-river from us.

Our company, the Benicia Port Terminal Company, is an integral part of California's largest port-oriented industrial complex--Benicia Industrial Park--which encompasses thousands of acres. As you know, we are on the north side of Carquinez Strait. Sites for industries that require deep water are at a premium in the lower bay and in fact almost unobtainable. We have such sites and there are other properties above us. But the water is not deep enough. Here at the Port of Benicia we have numerous bulk cargo proposals and all are dependent on the utilization of large vessels. When competing in the world market for raw materials, the final award between contenders sometimes is represented

by a difference measured in pennies. Large scale savings are derived from the use of big ships. As an example, the cost of ocean freight for a given cargo of ore based on the charter market prices during a period in late 1969 was as follows:

TONNAGE OF VESSELS	OCEAN FREIGHT PER LONG TON
10,000	$6.00 (plus)
50,000	$3.85
70,000	$2.70 - 2.80
100,000	$2.00 or less

These costs fluctuate and are now at a higher level, but the spread remains comparable.

So far, we have outlined our own particular problem. Our immediate neighbors, the huge refiners on both sides of the Strait, have needs as great as ours. Large oil tankers are even more common than large dry cargo vessels.

There are plans for fully integrated steel mills. Without deep water, such mills could not be built. Undoubtedly, they would go elsewhere, perhaps to other countries.

The tonnage compilations in your publication entitled "Waterborne Commerce" indicates the heaviest traffic to be in the Richmond area, continuing into and through the Carquinez Strait. It is in these areas that the larger ships need to be used. The John Baldwin Channel is a natural waterway to a vast area ready and available for development.

We have always supported the John Baldwin Channel project and its many ramifications. On February 26, 1968, Mr. Dale Stringfellow, now president of Benicia Industries, Inc. outlined the plans and tonnage potentials of our port. This was followed by another statement on January 20, 1969. These are undoubtedly in your files, but we attach copies for your ready reference.

The present 35-foot channel depth is restrictive. Up-river, the minimums are even less. The current project depth of 45 feet will be helpful but still inadequate. A minimum should be considered 55 feet or greater.

The potential is here. Deep water navigation would make it a reality.

Very truly yours,

BENICIA PORT TERMINAL COMPANY

JOS. L. DUDZIAK
Vice President

JLD:jt

Enclosures

SYSTEMS ECONOMIC ANALYSIS

1149 Chestnut Street · P.O. Box 7 · Menlo Park · California · (415) 322-5384

Written Comments of Benjamin V. Andrews, Partner,
Systems Economic Analysis, Concerning the
San Francisco Bay Region In-Depth Study

I wish to commend the Corps for undertaking this study project of waterborne transportation in the Bay Area and its tributaries, and especially on such a comprehensive scale. Inclusion of all the proposed elements of the study should assure the utmost possible quantitative consideration of all the factors such as environmental, land use, alternative transportation modes, and economic development, that bear upon waterways improvements. Toward this end of comprehensiveness, I should like to propose three additional items that appear beyond the scope of the presently defined investigation area as outlined in the map attached to the notice of your hearings. I believe that the more or less routine subjects for this study do not merit my comments at this time; and details of how the analyses are to be conducted are also inappropriate at this moment.

My first suggestion for extending the geographic area of coverage of this study, is to include the entire Sacramento and San Joaquin Rivers basins to an adequate elevation, to ascertain the long-range potential for extending shallow draft barge navigation north and south in the Central Valley. Specifically, minor channel improvements should permit efficient barge tows to move to Red Bluff, and to Modesto, Merced, and Madera. Only a few low-rise navigation locks and Ohio River type lowering dams, plus a minor addition to the levee system, should be needed to accomplish this proposal, as the elevations of the sea-level surface are very low. Other even more simple channel improvements, that should not harm the ecological balance, should eventually be completed on the Napa, Sonoma, Petaluma, and Feather and Guadalupe Rivers, and a few sloughs such as Suisun. The resulting tug and barge routes then could carry enormous tonnages of traffic, especially the more hazardous petroleum products, chemicals, and other large tonnage commodities that overcrowd our highways and freeways. Such barge movements are common in the Eastern United States, on all of the canalized rivers, and provide the lowest cost transport in the world, bar none. Accomplishment of the proposed improvements would extend this transport mode to most of the population centers of Northern California, provide an alternate to land transport, and lower costs, all without harming the climate. To my knowledge, this study has not been attempted thus far, and now appears to be the time, as part of the In-Depth Study.

A second suggestion that I would like to see included in the proposed Corps Study, is the consideration of the most likely alternatives to substantial further deepening of the bay. These alternatives

include possibilities that lie outside the Bay Area and investigation scope. Specifically, the Monterey Canyon leading to Moss Landing Harbor at Elkhorn Slough permits the closest approach of large ships to the California shore. With the requirement to lower the cost of American crude oil with respect to cheaper foreign sources, the carriage of Alaskan oil in supertankers is essential. The least disturbance of the geography would probably come from providing a sheltered, extremely deep-water oil tanker terminal at Moss Landing. Another alternative would be a supertanker terminal in the lee of Point Reyes, in Drakes Bay, or even in the shelter of Tomales Bay. Offshoure terminals there would lead pipelines ashore, but away from the several park boundaries, and then underground to the upriver refineries. Another alternative is to locate a terminal in the San Francisco Bay behind Alcatraz and Angel Island, but in naturally deep water, so that only the entrance bar channel and a few minor shoals need further dredging.

A third and related proposal for inclusion in the Corps study, is an evaluation of the potential desirability, costs and benefits, and diversion of traffic from the Bay area, as a result of development of bulk cargo deep-water ports and terminals at Moss Landing, at Humboldt Bay with improved land transport to the Sacramento River valley, and at San Luis Obispo with improved land transport to the San Joaquin River valley. If petroleum were to be handled at the coast or in the central San Francisco Bay, and major bulk commodities either shipped as slurries or transferred ashore in naturally deep water of the proposed new harbors, then little deepening of inland channels would be needed for general cargo, container, naval, and auxiliary craft of the forseeable future. Ancillary benefits would result from dispersion of industry, lessening the needs for increased transport system capacity in the central cities, and decreased public expenditures to achieve essential objectives. A definite governmental policy will need to be established to direct private enterprise in the paths of desirable public policy. Improvement of the poor roads over the coast range of mountains, and possibly construction of parallel railroads, may be needed as spurs to new port use, if new port developments are shown to be desirable alternatives.

Prepared for submission July 13, 1970

CITY AND COUNTY OF SAN FRANCISCO

BOARD OF SUPERVISORS

CITY HALL, SAN FRANCISCO 94102 • TELEPHONE 558-3184

DIANNE FEINSTEIN
PRESIDENT OF THE BOARD

May 12, 1970

Charles R. Roberts, Colonel, CE
District Engineer
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

My office has received your notice of public hearings on the San Francisco Bay Area in Depth Study with the attached House of Representatives' resolution.

I would like to take this opportunity to indicate my strong interest in receiving information and copies of available feasibility reports or studies which might in any way affect San Francisco Bay.

It has been rumored that a study has been completed to determine the feasibility of dredging the Bay to accommodate super-sized transport vessels and tankers, and secondly to determine the feasibility of a water-based oil terminal. I would appreciate information relative to these studies as soon as possible.

Sincerely yours,

SUPERVISOR DIANNE FEINSTEIN
President of the Board

DF:mn

19 Laurelwood Court
San Rafael, Ca. 94901
16 June 1970

Colonel Charles R. Roberts
San Francisco District Engineer
Corps of Engineers
100 McAllister St., San Francisco, Ca. 94102

Dear Colonel Roberts:

The Marin Audubon Society, a branch of the National Audubon Society, has learned with gratification of the changes in regulations of the Corps of Engineers calling for the consideration of environmental values in evaluating permit applications. We look upon this as a turning in the right direction.

We are interested in the announcement of the " in-depth regional study of the bay area, including the San Joaquin Delta region" recently announced by your office. While we are aware of the needs of commerce, industry and for continued economic stability we are concerned too with the impact future developments may have upon the waters and the shores of the Bay and the Delta.
The Marin Audubon Society believes that if such a study is to be made it should be made by the organization of regional nature most capable of insuring the implementation of the final recommendations by the myriad local interests and bodies involved. Furthermore it is believed the initial phase of the study should have as its aim the production of a report which will fully consider the total environment of the Bay and Delta region and show clearly the effect on that environment of any contemplated developmental action.

Very truly yours,
R. A. MacMillan
Ronald A. Macmillan
for the President and the Board of Directors of the Marin Audubon Society

MARIN CONSERVATION LEAGUE

A Non-Profit Corporation

"To Preserve and Develop the Natural Assets of Marin County
for the Benefit of All People"

BOX 437, ROSS, CALIFORNIA 94957

TELEPHONE 454-5597

June 11, 1970

Col. Charles R. Roberts
San Francisco District Engineer
U. S. Army Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

In your in-depth study of the San Francisco Bay and Delta Area, we hope you will give high priority to the environmental quality of our Bay communities.

It seems that if greater and greater emphasis is placed on developing larger and larger air transport, we should not compete in encouraging larger and larger water transport requiring deeper and deeper dredging.

The greatness of the United States is such that its high standing in the community of nations should not depend on whether or not we have the largest ships in our shallow, small-mouthed harbor.

We have read with deep appreciation of the U.S. Army Corps of Engineers' new environmental and "people" emphasis and we hope that your new trend will lead to plans that will help guarantee the orderly development of the harbor without the necessity of a great physical change.

Sincerely yours,

Harold Gregg

Harold Gregg
Executive Director

HG:mab

CALIFORNIA MANUFACTURERS ASSOCIATION

606 SOUTH HILL STREET
LOS ANGELES, CALIF. 90014
PHONE: (213) 627-4266

690 MARKET STREET
SAN FRANCISCO, CALIF. 94104
PHONE: (415) 362-8746

923 12TH STREET
SACRAMENTO, CALIF. 95814
PHONE: (916) 443-8107

Sacramento
June 22, 1970

District Engineer
San Francisco District, Corps of Engineers
Department of the Army
100 Mc Allister Street
San Francisco, California 94102

Dear Sir:

We are in receipt of your notice of hearing, dated May 1, 1970, which was addressed to our San Francisco office. Please address future notices of hearings to the undersigned at our Sacramento office (see letterhead). With respect to the study which was the subject of the hearing, we are interested in it and its findings, and would appreciate being informed when these are available for public comment.

We do not feel that we can add significantly to the information on shipping needs and patterns which others can better furnish than we. However, there is one aspect of the study to which we would like to call attention. As you may be aware, this organization took a very active part in the Bay-Delta study and in related studies of environmental problems in the Bay Area. We feel that, to date, these studies have not given adequate consideration to the problems of circulation in the South Bay. The Bay-Delta Study seemed to give very cursory consideration to the concept of using tidalhead for the purpose of flushing the South Bay, popularly known as the Gustafson Plan. Recent public release of partial information on a USGS study of this problem seems to confirm our concern.

In general, as time goes by, it seems more likely that environmental protection for the South Bay will require a thorough review of the Gustafson Plan, or something similar to it. This is because it seems to present an economical solution to several vexing problems which will otherwise cause great environmental stress. Reduction in flushing flows to the San Francisco Bay system will have the inevitable result of making the South Bay a negative estuary, with very little net flow other than the density currents characteristic of such estuarine systems. These density currents will cause a reduction in silt-caused turbidity. This, combined with nutrients present, could cause algal blooms and will certainly cause other undesirable environmental changes. Therefore, it is our conviction that public concern over these problems as their possibility comes nearer, will cause increased attention to the possibility of improving the flushing of the South Bay. To do this, no proposal suggested to date is as effective and economical as the Gustafson Plan.

Since a fundamental element of such a plan is the use of a barrier roughly parallel to the shore, it is apparent that any consideration of navigation in the South Bay must review this plan, and its general feasibility and its impact upon navigation. Fortunately, your own facilities for conducting such a study are superior to any in existence. It is possible that economy could be served by combining this aspect of your navigation study with other studies now in progress.

Sincerely yours,

Robert E. Burt
Director of Environmental Quality

REB/gld

OFFICE OF

THE DIRECTOR OF THE PORT

STOCKTON, CALIFORNIA

July 3, 1970

Colonel C. H. Roberts
District Engineer
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

In accordance with your Notice of Public Hearings on the San Francisco Bay Area In-Depth Study, I transmit herewith two copies of my official statement, which were to be submitted prior to July 13, 1970.

The attached written statement is in lieu of any oral presentation at the meetings of June 2, 5 and 11, at Oakland, Martinez and Sacramento.

Very truly yours,

C. W. Phelps
Director

CC Colonel George B. Fink
Sacramento District
Corps of Engineers
650 Capitol Mall
Sacramento, California 95814

OFFICE OF

THE DIRECTOR OF THE PORT

STOCKTON, CALIFORNIA

STATEMENT TO DEPARTMENT OF THE ARMY SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS ON THE SAN FRANCISCO BAY AREA IN DEPTH STUDY IN REGARD TO THE RESOLUTION ADOPTED 19 OCTOBER 1967, COMMITTEE ON PUBLIC WORKS, HOUSE OF REPRESENTATIVES.

July 3, 1970

After review of the Preliminary Plan of Study, March, 1969, and attendance by a representative of the Port of Stockton at the hearings 2 June 1970, Oakland and 11 June 1970, Sacramento, I am of the opinion that any study should be limited to the need for channel, port or transfer facilities development for super ships of bulk nature (dry or liquid) drawing in excess of 45 feet depth of water, exceeding 950 feet length and 106 feet beam.

There are now three studies under consideration: (1) Los Angeles Harbor Complex, (2) San Francisco Bay Area In-Depth Navigation Study and just recently requested (3) South Central Region of Alaska.

The Maritime Administration has just unveiled the new "Merchant Ships for the Seventies" as proposed in study of the two foremost national shipbuilding and design companies of the United States. The outside dimensions on tanker combination dry and liquid bulk carrier, containership and multi-purpose cargo ship do not exceed 900 feet, beam 147 feet and draft of 48 feet. The container class measure 685 feet length, 103 feet beam and 30 feet draft and the multi purpose general cargo exceeds the container class in draft only at 35 feet in draft.

It is thus obvious that the studies before us now are a result of the United States to match international foreign designs of super tankers and dry bulk carriers that would serve our national industrial complexes - steel, chemical and petroleum. Study should be limited to these to develop practical transfer points either in our immediate bays, harbors and ports inland or at off shore locations if they must be isolated to preserve proper environment and ecology of our community life.

Public ports of the nation have kept pace with modernization in container terminals, bulk grain and other dry bulk cargo facilities. They have mechanized for unit loads and have in cooperation with the Corps of Engineers, met the demands for deeper channels as local interests contribute.

Keen competition between ports and terminals has sharpened their efforts to secure tonnage, promote industry and advertise. Such competitive relationship should remain a problem for local districts, regions or state-wide activity, such as is evidenced by the Virginia State Port Authority that recently took over the competing ports in that state.

I believe the operation, promotion, solicitation, public relations and advertising as indicated in the House Resolution should remain a local, district or state concern.

I believe your initial study should attempt to narrow the defines or place priority of separate phases on this all encompassing resolution.

The Port of Stockton will cooperate in furnishing data from three survey studies it has made in the past 15 years by Stanford Research Institute, Murray Fox and Associates and Tudor Engineering Company. We will furnish statistics, physical data and present our views on how Federal agencies should utilize and protect ports that have been built with Federal funds for defense purposes as well as commercial traffic at the appropriate time in the study.

C. W. Phelps
Director

PORT OF OAKLAND

July 7, 1970

Colonel Charles R. Roberts
District Engineer
U. S. Army Corps of Engineers
100 McAllister
San Francisco, California 94102

Dear Colonel Roberts:

I have enclosed for the consideration of the Army Corps of Engineers the statement of the Port of Oakland with regard to the San Francisco Bay Area In-Depth Study.

We are very much concerned with the need for deepening of channels and the study of super-sized ships, as reflected in this statement, and it is our hope that in the final analysis and recommendation for Congress, these two vital subjects will receive the major attention of the Corps for the In-Depth Study.

You will find attached to this statement a resolution passed unanimously by the membership of the American Association of Port Authorities, which includes the Port of Oakland, at its 58th annual convention in San Francisco, October 27-30, 1969, regarding the continued independence from federal government control of ports and harbors.

During the public hearing of June 2 in Oakland, you requested that Wally Abernathy, who made the presentation on behalf of the Port of Oakland, provide specific information as to projected tonnage in the next five years and to information on the size of ships expected in the future. This information is now being compiled and will be forwarded to you in the next few days.

Please be assured that the Port of Oakland will cooperate with the Corps in the preparation of the study and that

66 Jack London Square • P.O. Box 2064 • Oakland, California, 94607 • Phone (415) 444-3188

material and data in our possession that is of significance will be made available.

Sincerely,

Ben E. Nutter
Executive Director

pm

Enclosure

STATEMENT SUBMITTED BY

BEN E. NUTTER
EXECUTIVE DIRECTOR, PORT OF OAKLAND

TO
U. S. ARMY CORPS OF ENGINEERS
SAN FRANCISCO BAY AREA IN-DEPTH STUDY

July 2, 1970

The Port of Oakland is an independent department of the Oakland city government with direct responsibility for developing commerce in the City of Oakland through its marine terminal facilities, the Oakland International Airport and our various industrial and commercial properties, including Jack London Square.

We understand that the purpose of receiving comments from local interests is for consideration by the U. S. Army Corps of Engineers in the preparation of the detailed program for the authorized Bay Area in-depth study.

Representing the largest general cargo port in Northern California, we naturally are directly concerned and in all probability will be affected by the results of your investigation. We are taking this opportunity to comment in general terms on your preliminary plan of study and to offer constructive suggestions which we think if followed by the Corps will result in a more meaningful study from the standpoint of the needs of maritime commerce in the Bay Area.

This proposed study extends the Corps beyond its traditional navigational role into areas which have formerly been under the planning purview of local interests by including such diverse elements as establishing guidelines for regional developments for maritime commerce and recommendations for improvements in harbor and industrial operations through improved coordination and programming, including solicitation, market research, public relations, advertising and long-term planning.

In the past, the harbor complexes of this country have developed through an informal but effective partnership between local and federal governments. Local agencies, such as the Port of Oakland, relying on local financing, have for the most part developed the great port facilities of this country. The federal government has taken on the important and heavy financial responsibility of providing and maintaining the deepwater shipping channels that serve these locally constructed and controlled port facilities. We believe this arrangement has made sense and adequately served the maritime needs of this country.

The economy of cities such as Oakland is dependent in large measure upon their port facilities. We have estimated that the benefits to this community from the Port of Oakland operations alone exceed $200 million annually in wages, taxes, construction, purchase of supplies and materials, etc., and that

20% of the jobs in Oakland are supported by Port enterprises. Since the city's economic destiny depends largely on its Port, local interests naturally wish to exercise close control over its operation and development.

In Oakland we believe we have done an excellent job of providing facilities for maritime commerce. As most of you know, the waterfronts of the world are being reshaped by recent innovations in cargo handling techniques primarily caused by the advent of containerization. In a matter of just a few years methods of handling cargo have changed dramatically, affecting trade routes and the physical harbor facilities. In less than five years we have had not only to anticipate and plan for these changes, but we have financed, constructed and completed modern marine terminals to serve the changing and growing requirements of this trade.

Through our own research, as well as independent studies, we have attempted to logically anticipate the needs of containerization. In 1966 we retained an independent consulting firm to estimate the volume of tonnage that we could expect in Oakland by 1980. That consultant predicted that by 1980 the Port would handle one million tons of containerized cargo. In 1967 we retained a different consultant to review and update the previous study. That consultant estimated that by 1980 we would have

2,900,000 tons of containerized cargo. Antually in 1969, we had over 3 million tons of containerized cargo, exceeding the 1980 estimate and eleven years ahead of schedule.

It is difficult for any long range planning exercise to accurately predict the implications of technological advances. The problem here is compounded by the fluidity of international trade with nations and commodities introducing an overwhelming combination of variables which practically defy the possibility of accurate long range projections. For example, the 50 year forecast for Oakland Harbor tonnage prepared in 1959 by the Corps estimated that general cargo in the foreign and coastwise trades would increase from the 1957 level of 1,943,000 tons at a rate of approximately 40,000 tons annually to about 4,000,000 in 2010. Last year--41 years earlier than expected--we handled in excess of 4 million tons of foreign cargo alone exclusive of 2.3 million tons handled at the military facilities in the Oakland Harbor.

The Port of Oakland feels the pressures of a growing trade now and they cannot be ignored during the in-depth study. We have to act fast to provide facilities to serve the new vessels that are being planned and constructed by shipping lines throughout the world. The trade will probably continue to change dramatically during the course of this in-depth study which may take five years or longer to accomplish. In the most recent five year period

ending this year, the Port of Oakland will have increased its shipping capacity from 18 to 29 berths, and last year alone Oakland harbor marine cargo rose by almost 2 million tons, a 54% increase over the previous year. If this study were commenced five years ago, the data developed in the early years would be totally out of date with the situation as we find it today.

Just as we are responding to the changing and expanding requirements of the trade, the Corps must likewise move quickly to improve the navigational channels serving our facilities. It is our opinion, to be most meaninfgul the study should concentrate on those elements where the Corps has been traditionally involved in its harbor partnership with local interests, that is, the need for the development of the shipping channels. Our channels in the Bay Area are inadequate and we suggest that this study determine an immediate and expeditious program for developing channels for the present and future requirements of maritime commerce in the Bay Area. Local agencies, such as our port, as I have explained, have moved in a short period of time to develop new terminals, but the channels have not improved on the same accelerated schedule. The Oakland Estuary which serves a large share of our terminal facilities has a present depth of minus 30 feet MLLW, which was authorized by Congress in 1910. Fifteen years ago in 1955 a Congressional authorization was received to study the advisability of deepening

the Estuary channel. In 1962, Congress authorized a project to deepen the Estuary channel to 35 feet. We are hopeful but not positive that the dredging for this new depth will commence this fall. If this local-federal partnership is to work in the future, then channel deepening projects must somehow be accomplished more expeditiously. We needed a 35 foot channel in 1955. Today we need at least 40 feet and we cannot wait another fifteen years until we reach this new depth.

Shipping lines throughout the world are planning and actually constructing "Pan-Max" vessels, which is a term that refers to the maximum size vessel that can navigate the Panama Canal. These "Pan-Max" vessels will soon be calling in the Bay Area at Port of Oakland facilities. These large vessels have a draft of approximately 40 feet, are approximately 950 feet in length and have a width of 106 feet. Sea-Land Service, for example, one of the major United States flag carriers, has under construction eight of these vessels, some of which will be assigned to the Pacific trade and call at Oakland. The Japanese lines are planning "Pan-Max" ships, and after just returning from a trade trip calling on the various steamship headquarters in Europe we find that the European lines are also actively planning construction of these super-sized ships. It is possible that in the next several years even larger vessels will be required if it

is determined that vessels should be dedicated exclusively to the Pacific trade, forsaking the possibility of a Panama Canal transit to the Atlantic. If this decision is made by the lines, and it is a real possibility, then we could have a requirement for even deeper draft general cargo vessels calling in the Bay Area.

One of the aspects of the study is to consider the requirements for bulk carriers. The space requirements of general cargo and the close proximity of residential, commercial and industrial properties have influenced our thinking that additional tanker facilities should not be developed in Oakland. Judging from the general Bay Area plan of the Bay Conservation and Development Commission, the Bay ports south of the Bay Bridge have not been designated for large bulk carriers such as super tankers and super bulk carriers with drafts more than 50 feet. Consequently for the foreseeable future, we do not expect the channel requirements for the ports south of the Bay Bridge to exceed a 50 foot depth.

It will be very difficult for the proposed study to give meaningful consideration to the requirements of tankers from the rather limited scope of the Bay Area study. I do not believe the requirements of large bulk carriers can be considered on a meaningful basis from a regional standpoint but rather a broader national view has to be taken in reviewing the problem of

accommodating and providing proper safeguards for the handling of these mammoth vessels.

We wish to be as cooperative as possible with the Corps in the undertaking of this study. We have data and material which we are pleased to make available to the Government. However, we hope the emphasis and the direction of the investigation is toward the real problem, which is the inadequacy of our channels, and urge that the study not be unduly diluted by including areas which are traditionally and more properly the concern of local interests.

In summary, we suggest the study be undertaken and we hope that it be pinpointed more directly to the problem of channels. This type of concentrated study needs to be started as soon as possible and completed within a reasonable period of time, say a year to a year and a half. A three or five year study, such as presently proposed, would be out of date before completed and would tend to inhibit maritime commerce by curtailing needed developments, including channel improvement projects, while the effort is undertaken. The preliminary plan of the study indicates that the development of the plan will in no way preclude or defer for future action the execution or completion of projects already authorized. However, this statement does not include projects that need to be authorized during the scope of the study. We do

not believe the region would be well served by waiting five years for the completion of the study before we can consider and start the progress toward deepening the channels which are so obviously needed.

RESOLUTION E-11

THE AMERICAN ASSOCIATION OF PORT AUTHORITIES

UNANIMOUSLY PASSED AT ITS

58TH ANNUAL CONVENTION

SAN FRANCISCO, CALIFORNIA

OCTOBER 27-30, 19~~70~~ 69

B-1128

NO. E-11

REGARDING CONTINUING INDEPENDENCE FROM GOVERNMENT CONTROL OF PORT AND TERMINAL USE AND DEVELOPMENT

WHEREAS, various Federal agencies have indicated, through studies and study proposals, a Federal interest in the direction and possibly the control of port and terminal development at the nation's ports (including their land transportation facilities) which have been historically and successfully accomplished by non-Federal interests; and

WHEREAS, there is now pending legislation in the Congress of the United States regarding so-called "Coastal Zone Management" which, by authorizing Federal grants to States which establish an agency and adopt coastal development plans approved by the Federal government, would provide indirect Federal control over development in established ports now under local control; and

WHEREAS, as sound business enterprises, ports flourish best in a competitive business atmosphere; and

WHEREAS, the ports have demonstrated that they are fully capable of determining and meeting the commercial and military shipping needs of the nation by providing, without Federal grants, the necessary facilities for their respective areas;

NOW, THEREFORE, BE IT RESOLVED, That The American Association of Port Authorities opposes any effort on the part of the Federal government to control or tend to control, directly or indirectly, through regulations, grants-in-aid or otherwise, port and terminal planning and development at the nation's ports (including their land transportation facilities) or to allocate or mandate port activity as to type, classification, scope or location; and

BE IT FURTHER RESOLVED, That The American Association of Port Authorities insists on its right to and the need for its full participation in any Federal examination or study of the ports of this nation and authorizes its Committee on United States Transportation Policy to be responsible for such participation before the Executive and Legislative branches of the Government; and

BE IT FURTHER RESOLVED, That The American Association of Port Authorities strongly supports the right of the public ports of the United States to self-development in a climate of free competition and oppose Federal legislation which requires or permits Federal control of development; and

BE IT FURTHER RESOLVED, That the United States members of the Executive Committee be and they hereby are authorized and directed to formulate, on behalf of the Association, recommendations as to the proper respective responsibilities of the Federal Government, on the one hand, and the State and local port agencies of the United States on the other, in the planning and development of the nation's ports (including their land transportation facilities) and upon formulation thereof, to communicate such recommendations to the Committee on United States National Transportation policy for its use as well as that of the United States members of the Executive Committee in their participation before the Executive and Legislative branches of the Federal Government.

(Unanimously passed)
(U.S. Members Only Voting)

JAMES P. KENNY, RICHMOND
1ST DISTRICT
ALFRED M. DIAS, SAN PABLO
2ND DISTRICT
JAMES E. MORIARTY, LAFAYETTE
3RD DISTRICT
THOMAS JOHN COLL, CONCORD
4TH DISTRICT
EDMUND A. LINSCHEID, PITTSBURG
5TH DISTRICT

THE BOARD OF SUPERVISORS

CONTRA COSTA COUNTY

ADMINISTRATION BUILDING, ROOM 103
P. O. BOX 911
MARTINEZ, CALIFORNIA 94553
PHONE 228-3000

THOMAS JOHN COLL
CHAIRMAN
JAMES P. KENNY
VICE CHAIRMAN
WALTER T. PAASCH
CLERK
MRS. GERALDINE RUSSELL
ASSISTANT CLERK OF BOARD
REGULAR MEETINGS THE FIRST FOUR TUESDAYS OF EACH MONTH

July 7, 1970

Col. Charles R. Roberts
District Engineer
U. S. Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Enclosed is a copy of Resolution No. 70/406 which was adopted on July 7, 1970 by the Board of Supervisors of Contra Costa County in support of the In-Depth Navigation Study of the San Francisco Bay Area.

Very truly yours,

W. T. PAASCH, CLERK

By Joyce M. Krekel
Joyce M. Krekel
Deputy Clerk

IN THE BOARD OF SUPERVISORS
OF
CONTRA COSTA COUNTY, STATE OF CALIFORNIA

In the Matter of Supporting In-Depth Navigation Study of the San Francisco Bay Area.	RESOLUTION NO. 70/406

WHEREAS the Corps of Engineers has by a public notice dated May 1, 1970 indicated the initiation of an In-Depth Navigation-Study of the San Francisco Bay Area in response to a resolution by the Congress of the United States; and

WHEREAS a major portion of the commercial shipping of the Bay Area crosses the docks within Contra Costa County; and

WHEREAS one-half of the assessed valuation of the County is in commercial and industrial installations, many of which rely on continued access by ships using the navigable waterways of the world; and

WHEREAS the County recognizes the concurrent need for careful evaluation of any changes in the environmental and aesthetic aspects of the estuary of the Golden Gate; and

WHEREAS the impact on the ecological balance of the estuary must be considered in determining courses of action for future development of navigation; and

WHEREAS it is understood that said study by the Corps of Engineers and other Federal, State, and local agencies will undertake the task of defining the inter-relationship and the interdependence of these diverse elements as they affect the Bay Region and will then propose alternatives for future action by local governments;

NOW THEREFORE BE IT RESOLVED that the Board of Supervisors of Contra Costa County, State of California, supports the continuation of this In-Depth Navigation Study with the knowledge that the information gained will be of great assistance to concurrent planning underway by County agencies and that the County will cooperate in any way possible in providing data for use in said Study.

PASSED AND ADOPTED this 7th day of July, 1970, by the following vote of the Board:

AYES: Supervisors J. P. Kenny, A. M. Dias, J. E. Moriarty, T. J. Coll.

NOES: None.

ABSENT: Supervisor E. A. Linscheid.

I HEREBY CERTIFY that the foregoing is a true and correct copy of a resolution entered on the minutes of said Board of Supervisors on the date aforesaid.

Witness my hand and the Seal of the Board of Supervisors affixed this 7th day of July, 1970.

W. T. PAASCH, CLERK

By Joyce M. Krekel Deputy Clerk
Joyce M. Krekel

cc: Col. Charles R. Roberts, District Engineer,
U. S. Corps of Engineers, San Francisco
Congressman Jerome R. Waldie
Senator George Murphy
Senator Alan Cranston
Public Works Director (5)
County Administrator

STOCKTON
ELEVATORS

P. O. BOX 1566 · STOCKTON, CALIFORNIA · (209) 466-4261
95201

July 9, 1970

Colonel C. R. Roberts
Department of the Army
San Francisco Dist. Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

In accordance with your Notice of Public Hearings on the San Francisco Bay Area In-Depth Study, I transmit herewith two copies of my official statement, which were to be submitted prior to July 13, 1970.

The attached written statemen is in lieu of any oral presentation at the meetings of June 2, 5 and 11, at Oakland, Martinez and Sacramento.

Very truly yours,

STOCKTON ELEVATORS

R. J. Hnath

R. J. Hnath,
Vice-president

STATEMENT TO DEPARTMENT OF THE ARMY SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS ON THE SAN FRANCISCO BAY AREA IN DEPTH STUDY IN REGARD TO THE RESOLUTION ADOPTED 19 OCTOBER 1967, COMMITTEE ON PUBLIC WORKS, HOUSE OF REPRESENTATIVES.

July 9, 1970

We are operators of Stockton Elevators, located at the head of the Stockton deep water channel. We also operate the Port of San Francisco Terminal, located at Pier 90 on the San Francisco Bay. Both of these facilities are operated as public grain elevators, handling bulk grain and feedstuffs for export. Virtually all of the commodities we handle are destined to countries in the Orient, with Japan being the prime country of destination.

Our concern with your study centers on two major points.

1. As Japan increases her imports of feedstuffs she becomes more desirous of spreading her risks by obtaining sources other than the U. S. Gulf. Unless the West Coast of the U. S. is made available as a source, she will find her alternate sources in other countries. Since Japan is the largest cash customer the U. S. has for agricultural exports, we cannot afford to lose her business.

2. The economics of operation of the larger bulk carriers is well recognized and established. Also, there is a trend towards proprietary ownership of these new large bulk carriers by the large Japanese trading firms. They recognize that the most effective use of these large vessels is in a trans-pacific shuttle with quick turn-around time. These bulk grain carriers require 40 to 45 feet of water and some new construction will exceed the Panama Canal limitations.

The points made above illustrate the pressures that are developing towards an ever greater movement of feed-grains and feed-stuffs off the West Coast of the U. S. The San Francisco Bay Area is in a natural position to draw much of the production of the Midwest and Southwest grain-belts, so we must gear ourselves to accomodate this business or lose it by forfeit. What is needed is deeper drafts to accomodate the expected traffic which is coming upon us already.

Current projects provide for 35 feet to Stockton. We need to know from your study if 40 feet is possible. Also, what maximum drafts are feasible in San Francisco Bay. We have 40 feet available now and will need 45 feet in the near future. These are the considerations we ask you to include in your study.

Very truly yours,

STOCKTON ELEVATORS

R. J. Hnath, Vice-president

SAN FRANCISCO BAY CHAPTER *of the Sierra Club*

July 13, 1970

Colonel Charles R. Roberts
Department of the Army
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Re: Notice of Public Hearings on San Francisco Bay Area In-Depth Study, 1 May 1970

Dear Colonel Roberts:

The Conservation Committee of the Club's San Francisco Bay Chapter views with considerable concern the implications of the Corps' Bay Area In-Depth Study. First of all, the present study appears to be predicated on the assumption that the San Francisco Bay and estuary is a suitable place for planning large scale industrial development, particularly for heavy industry. Secondly, the study appears to include only minor considerations of the detrimental environmental and public health effects which usually accompany large scale developments of shipping for heavy industry.

We do not believe that the San Francisco estuary is a proper and suitable place for expansion of heavy industry and the use of deep draft vessels. We believe that the Corps of Engineers study should be limited to the maintenance of navigable waters and the steps to be taken to protect and enhance the water resources and related environmental values, rather than to planning for economic development. However, if there is a congressional mandate to embark on an "In-Depth Study" we believe the Corps should give first consideration to the environmental matters of primary interest to the general public.

Since any plans for bringing deep draft vessels into this estuary or any plans for increased heavy industrial use of its waters will substantially change the estuary ecology and may cause great environmental damage to this unique and sensitive estuarine system, we believe that if the proposed study goes ahead, it should first investigate and evaluate possible environmental damage before considering any economic or engineering factors.

We believe that the protection of a natural environment should at least be equal to the possible benefits from a major development of this kind. Environmental problems associated with a major expansion of San Francisco Bay Area shipping and heavy industry (steel mills, refineries, etc.) would include the following:

Air pollution from:
- combustion by-products of stationery and moving ships;
- cleaning of vessel boiler tubes;
- spills and leaks during the transfer of volatile liquids and fluidized granular products; and
- odors such as those from mercaptan and certain sulphur compound ventings.

Water pollution from:
- vessel garbage, sanitary wastes, and cooling water discharge;
- bilge and ballast tank discharges;
- spills and leaks during transfer of liquids such as oils and acids;
- resuspension of sediments due to ship movements and wave-wash;
- suspension of silt due to repeated dredging required for new and deeper channels;
- increased salinity incursions in the Delta tidal zone due to channel deepenings and other improvements;
- increased turbidity due to channel side and bottom erosion;
- formation of dead spaces and the reduction of lateral circulation due to the modification of present channel flow patterns; and
- disposal of dredged material on land or in Bay dumping grounds.

Noise pollution from:
- day and night bulk transfer operations;
- crane cargo handling operations; and
- increased night-time tug-assisted docking and turning operations.

Visual pollution from:
- additional bulk storage and warehousing complexes;
- heavy industry and integrated ancillary industrial complexes; and
- refineries and tank farms.

In addition there are grave public and environmental hazards in large bulk handling and storage facilities. Among the potential accidents are:

- collision of bulk fluid transporters;
- ignition of bulk flammables;
- explosion of fluidized dusts during transfer;
- detonation of military cargoes and stocks;
- release of chemical or biological warfare agents; and
- nuclear devastation of military shipping and staging complexes.

If the study proceeds, we believe it must first investigate these and other aspects of public well-being and environmental health.

Needless to say, all forms of pollution degrade the environment, not only for fish and wildlife, but also for man. The Bay-Delta estuary is an important and vital recreation area for millions of Northern Californians. This estuary already has air, water, noise and visual pollution, problems which already require at least several billion dollars to correct. Further planning for

grandiose regional developments, such as those suggested by certain responses in Appendix B of your 1969 Preliminary Study Plan, should be aborted until present developments are made more tolerable.

If you proceed with the proposed study, we request the opportunity to participate, along with other citizen organizations, in the continuing processes of your study. We would appreciate receiving notices of hearings and copies of reports when they are available.

Sincerely,

Pete Zars

Pete Zars, Chairman
Environmental Pollution Sub-Committee

PZ:nmc

the cost benefits that might be ascribed to increased industrial and shipping developments.

We request the opportunity to receive notices of hearings, copies of reports and to make comments as your study progresses.

Yours very truly,

Jake Miller

Jacob H. Miller, Chairman
Water Resources Sub-Committee

JHM:nmc

PART II

COORDINATION ACTIVITIES

AND COMMENTS FROM OTHERS

II-A FEDERAL AGENCIES

1. CORPS OF ENGINEERS LETTER REQUESTING PARTICIPATION

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
100 McALLISTER STREET
SAN FRANCISCO, CALIFORNIA 94102

SPNED-RD 20 August 1970

Mr. William M. Monroe
Regional Coordinator
Pacific Southwest Region
Department of the Interior
Box 36098
450 Golden Gate Avenue
San Francisco, California 94102

Dear Mr. Monroe:

Reference is made to SPNED-R letter dated 7 April 1969 transmitting copies of the report entitled, "Preliminary Plan of Study of San Francisco Bay Area In-Depth Study." Another copy of this report, Inclosure 1, is inclosed for your ready reference. As stated in Inclosure 1, the purpose of this investigation is to prepare a plan to guide the development of the San Francisco Bay Region, with the objectives of promoting and encouraging the efficient, economic, and logical development of the harbor complex and its hinterland. The study will be a coordinated, comprehensive, multi-agency investigation encompassing engineering, economic, social, and evironmental aspects of the future development of the San Francisco Bay Port System.

As a continuation of this investigation after review of the Preliminary Plan, Congress directed the Corps of Engineers to prepare a Detailed Plan of Study for Congressional review in March 1971.

In discussing the development of the Detailed Plan of Study, reference is made to Exhibit I, the Federal Agencies Participation Matrix, in the inclosed Preliminary Plan of Study. The matrix indicates the areas of participation of the various agencies. Also, a description of the separate study items is presented beginning on page 6, as well as the designation of agency participation by study item beginning on page 16.

Currently, the Detailed Plan of Study is being formulated. In order to establish the exact nature and extent of your agency's participation and contribution to the investigation, the following field level information is requested for incorporation into the Detailed Plan of Study.

a. Additional items of study to be included in the investigation and/or additional definitions of currently identified study items.

b. Comments relating to the area of participation by your agency in the total study matrix.

c. Information on all existing and/or planned investigations that may relate to all or part of this investigation, including estimated time schedules and costs.

d. Time and cost estimates related to conducting investigations considered pertinent to the In-Depth Study.

To effectively coordinate this investigation, the designation of a person (or persons) as coordinator for your office for this study is needed by 4 September 1970. Also, in order to properly evaluate all the data from various agencies for inclusion in the March 1971 report, a preliminary input of the requested information is needed from you on or before 21 September 1970. A draft of your final field level statement is needed by 13 November 1970 and your final field level statement for the Detailed Plan of Study by 4 December 1970.

For potential parameters toward establishing the scope of the investigation, reference is made to Inclosure 2, "Projected Waterborne Commerce, San Francisco Bay and Delta Ports," and Inclosure 3, "Relationship Between Deadweight Size and Vessel Draft."

For your information, Inclosure 4 lists the names and telephone numbers of San Francisco District personnel designated as coordinator for each major study area.

SPNED-RD

20 August 1970

Mr. William M. Monroe

The objectives and comprehensive scope of the San Francisco Bay Area In-Depth Study necessitate the close correlation of the various study elements and the close coordination between participating agencies in this investigation. Therefore, if you have any questions relating to your assistance as requested above, including funding problems, please do not hesitate to contact this office, telephone number: (415) 556-7924.

Sincerely yours,

4 Incl
As stated

CHARLES R. ROBERTS
Colonel, CE
District Engineer

LIST OF FEDERAL AGENCIES

RECEIVING LETTER OF AUGUST 20, 1970

Mr. J.W. Deinema, Regional
Forester, Region 5
Forest Service
U.S. Department of Agriculture
630 Sansome Street
San Francisco, Calif. 94111

Mr. T. P. Helseth, State
Conservationist, Soil Conservation
Service, Calif. State Office
U.S. Department of Agriculture
2020 Milvia Street
Berkeley, Calif. 94704

Mr. L.C. Fleming, Pacific Coast
Director, Maritime Administration
U.S. Department of Commerce
450 Golden Gate Avenue
San Francisco, Calif. 94102

Mr. William M. Monroe, Regional
Coordinator, Office of the Secretary
Pacific Southwest Region
U.S. Department of the Interior
Box 36098
San Francisco, Calif. 94102
(Office location: 450 Golden
Gate Avenue)

Mr. R.J. Pafford, Jr., Regional
Director, Region 2
Bureau of Reclamation
U.S. Department of the Interior
2800 Cottage Way
Sacramento, Calif. 95825

Mr. John A. Rutter, Regional
Director, Western Regional Office
National Park Service
U.S. Department of the Interior
450 Golden Gate Avenue
San Francisco, Calif. 94102

Mr. Robert O. Davis
Pacific Regional Engineer
Geological Survey
U.S. Department of the Interior
345 Middlefield Road
Menlo Park, Calif. 94025

Rear Admiral C. R. Bender, USCG
Commander, Western Area
Commander, Twelfth Coast Guard Dist.
U.S. Department of Transportation
630 Sansome Street
San Francisco, Calif. 94111

Mr. M. B. Austin, Regional Engineer
Bureau of Power
Federal Power Commission
555 Battery Street
San Francisco, Calif. 94111

Mr. E. C. Shute
Office of the Manager
U.S. Atomic Energy Commission
2111 Bancroft Way
Berkeley, Calif. 94704

Mr. P. M. Creighton, Director
Office of Field Services
Department of Commerce
Box 36013
450 Golden Gate Avenue
San Francisco, Calif. 94102

Mr. R. V. Enochian
Economic Research Service
Western Research Office
Post Office Building
Berkeley, Calif. 94704

Mr. C. A. Roumasset,
Regional Director
Bureau of Labor Statistics
Box 36017
450 Golden Gate Avenue
San Francisco, Calif. 94102

Mr. R. B. Pitts
Regional Administrator, Region 6
U. S. Department of Housing and
Urban Development
450 Golden Gate Avenue
San Francisco, California 94102

Mr. John Findlay
Regional Director
Fish and Wildlife Service
P.O. Box 3737
Portland, Oregon 97208

Mr. Paul DeFalco, Jr., Director
Pacific Southwest Regional Office
Federal Water Pollution Control
Administration
760 Market Street
San Francisco, Calif. 94102

Mr. D. R. Irving
Director, Area VI
Mineral Resource Office
Bureau of Mines
450 Golden Gate Avenue
San Francisco, Calif. 94102

Mr. Frank Sylvester, Director
Pacific Southwest Region
Bureau of Outdoor Recreation
450 Golden Gate Avenue
San Francisco, Calif. 94102

Mr. H. E. Aldridge
Area Manager
Federal Aviation Administration
831 Mitten Road
Burlingame, Calif. 94010

Mr. S. E. Farin
Regional Administrator
Federal Highway Administration
450 Golden Gate Avenue
San Francisco, Calif., 94102

Mr. A. L. Hynes
Regional Director
Federal Railroad Administration
450 Golden Gate Avenue
San Francisco, Calif. 94102

Mr. Thomas J. Patterson, Jr.
Western Region Director
Maritime Administration
450 Golden Gate Avenue
San Francisco, Calif. 94102

A. Ross Eckler, Director
Bureau of Census
5300 Santa Monica Blvd
Los Angeles, Calif. 90029

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
100 McALLISTER STREET
SAN FRANCISCO, CALIFORNIA 94102

SPNED-RD 25 September 1970

Mr. Robert Coop
Regional Director, Region 9
Department of Health, Education and Welfare
50 Fulton Street
San Francisco, California 94102

Dear Mr. Coop:

Reference is made to SPNED-R letter dated 7 April 1969 transmitting 20 copies of the report entitled, "Preliminary Plan of Study of San Francisco Bay Area In-Depth Study." Another copy of this report, Inclosure 1, is inclosed for your ready reference. As stated in Inclosure 1, the purpose of this investigation is to prepare a plan to guide the development of the San Francisco Bay Region with the objectives of promoting and encouraging the efficient, economic, and logical development of the harbor complex and its hinterland. The study will be a coordinated, comprehensive, multi-agency investigation encompassing engineering, economic, social, and environmental aspects of the future development of the San Francisco Bay Port System.

As a continuation of this investigation after review of the Preliminary Plan, Congress directed the Corps of Engineers to prepare a Detailed Plan of Study for Congressional review in March 1971.

In discussing the development of the Detailed Plan of Study, reference is made to Exhibit I, the Federal Agencies Participation Matrix, in the inclosed Preliminary Plan of Study. This matrix is currently under revision. Of special interest to your office is the change being made to broaden the scope of Study No. 5, "Economic Base," to encompass general well-being and quality of environment factors. Consequently, the name of Study No. 5 has been changed to "Social Well-Being Impact." A copy of the general scope of this study, Inclosure 2, is inclosed for your information. It is anticipated that your office would be added to the study matrix as a study participant for the study on "Social Well-Being Impact."

SPNED-RD 25 September 1970
Mr. Robert Coop

In order to establish the exact nature and extent of your agency's participation and contribution to the investigation, the following field level information is requested for incorporation into the Detailed Plan of Study.

a. Additional items of study to be included in the investigation and/or additional definitions of currently identified study items.

b. Comments relating to the area of participation by your agency in the total study matrix.

c. Information on all existing and/or planned investigations that may relate to all or part of this investigation, including estimated time schedules and costs.

d. Time and cost estimates related to conducting investigations considered pertinent to the In-Depth Study.

A meeting to report on the progress of the preparation of the Detailed Plan of Study to all participating Federal agencies will be held beginning at 9:00 a.m. on 2 October 1970 at this office, room 100-A, 100 McAllister Street. Attendance by a representative from your office is requested.

In order to properly evaluate all the data from various agencies for inclusion in the March 1971 report, a preliminary input of the requested information is needed from you on or before 16 October 1970. A draft of your final field level statement is needed by 13 November 1970 and your final field level statement for the Detailed Plan of Study by 4 December 1970.

The objective and comprehensive scope of the San Francisco Bay Area In-Depth Study necessitates the close correlation of the various study elements and the close coordination between participating agencies in this investigation. Therefore, if you have any question relating to your assistance as requested above, please contact Mr. Dick F. Eng of this office, telephone number 556-7924.

It would be appreciated if Mr. Eng could be furnished by telephone the name of your representative in advance of the 2 October 1970 meeting.

Sincerely yours,

2 Incl
As stated

Israel H. Steinberg
Acting District Engineer

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
100 McALLISTER STREET
SAN FRANCISCO, CALIFORNIA 94102

SPNED-RN 29 October 1970

Mr. Ernest D. Murphy
Interstate Commerce Commission
450 Golden Gate Avenue
San Francisco, California 94102

Dear Mr. Murphy:

Reference is made to your meeting with Lt. Michael Cobb and Mr. Harry Erlich of my staff on 29 October 1970 relative to the San Francisco Bay Area In-Depth Study. The purpose of this study is to prepare a plan to guide the development of the San Francisco Bay Region with the objectives of promoting and encouraging the efficient, economic, and logical development of the harbor complex and its hinterland. The study will be a coordinated, comprehensive, multi-agency investigation encompassing engineering, economic, social, and environmental aspects of the future development of the San Francisco Bay Port System.

Inclosed for your information is a copy of the report entitled, "Preliminary Plan of Study of the San Francisco Bay Area In-Depth Study," dated March 1969 (Inclosure 1). As a continuation of this investigation after review of the Preliminary Plan, Congress directed the Corps of Engineers to prepare a Detailed Plan of Study for Congressional review in March 1971.

In discussing the development of the Detailed Plan of Study, reference is made to Exhibit I, the Federal Agencies Participation Matrix, in the inclosed Preliminary Plan of Study. This matrix is currently under revision. Of special interest to your office is the change being made to combine the Intermodal Transportation Study (Study No. 2) and the Transportation Economics Study (Study No. 6) into a single study named the Transportation Systems Study. It is anticipated that your office would be added to the study matrix as a study participant for the Transportation Systems Study and the Commodity Flow Study. A copy of the draft study items of these two studies, Inclosures 2 and 3, are inclosed for your information.

SPNED-RN 29 October 1970
Ernest D. Murphy

In order to establish the exact nature and extent of your agency's contribution to the investigation, the following field level information is requested for incorporation into the Detailed Plan of Study.

a. Additional items of study to be included in the investigation and/or additional definition of currently identified study items.

b. Comments relating to the area of participation by your agency in the total study matrix.

c. Information on all existing and/or planned investigations that may relate to all or part of this investigation, including estimated time schedules and costs.

d. Time and cost estimates related to conducting investigations considered pertinent to the In-Depth Study.

In order to properly evaluate all the data from various agencies for inclusion in the March 1971 report, a field level statement on the requested information is needed from you no later than 4 December 1970.

The objective and comprehensive scope of the San Francisco Bay Area In-Depth Study necessitate close correlation of the various study areas and the close coordination between participating agencies in this investigation. Therefore, if you have any question relating to your assistance as requested above, please contact Mr. Dick F. Eng of this office, telephone number (415) 556-7924.

Sincerely yours,

3 Incl
As stated

CHARLES R. ROBERTS
Colonel, CE
District Engineer

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
100 McALLISTER STREET
SAN FRANCISCO, CALIFORNIA 94102

SPNED-RN

23 November 1970

Mr. Lee A. Seidell
State Executive Director
California State Agriculture Stabilization
and Conservation Office
U.S. Department of Agriculture
2020 Milvia Street
Berkeley, California 94704

Dear Mr. Seidell:

Reference is made to your telephone conversation with Mr. Dick F. Eng of my staff on 17 November 1970 relative to the San Francisco Bay Area In-Depth Study. The purpose of this study is to prepare a plan to guide the development of the San Francisco Bay Region with the objectives of promoting and encouraging the efficient, economic, and logical development of the harbor complex and its hinterland. The study will be a coordinated, comprehensive, multi-agency investigation encompassing engineering, economic, social, and environmental aspects of the future development of the San Francisco Bay Port System.

Inclosed for your information are two copies of the report entitled, "Preliminary Plan of Study of the San Francisco Bay Area In-Depth Study," dated March 1969 (Inclosure 1). As a continuation of this investigation after review of the Preliminary Plan, Congress directed the Corps of Engineers to prepare a Detailed Plan of Study for Congressional review in March 1971.

In discussing the development of the Detailed Plan of Study, reference is made to Exhibit I, the Federal Agencies Participation Matrix, in the inclosed Preliminary Plan of Study. This matrix is currently under revision. The Commodity Credit Corporation was not included in the participation matrix of the Preliminary Plan of Study. However, it has come to our attention that CCC may have a significant contribution to the Commodity Flow Study relative to the dispensation and exportation

of the Government stock of grain products. Two copies of the expanded study items for the Commodity Flow Study are inclosed for your information (Inclosure 2).

In order to establish the exact nature and extent of your agency's contribution to the investigation, the following field level information is requested for incorporation into the Detailed Plan of Study.

a. Additional items of study to be included in the investigation and/or additional definition of currently identified study items.

b. Comments relating to the area of participation by your agency in the total study matrix.

c. Information on all existing and/or planned investigations that may relate to all or part of this investigation, including estimated time schedules and costs.

d. Time and cost estimates related to conducting investigations considered pertinent to the In-Depth Study.

In order to properly evaluate all the data from various agencies for inclusion in the March 1971 report, a field level statement on the requested information is needed from you no later than 21 December 1970.

The objective and comprehensive scope of the San Francisco Bay Area In-Depth Study necessitate close correlation of the various study areas and the close coordination between participating agencies in this investigation. Therefore, if you have any question relating to your assistance as requested above, please contact Mr. Dick F. Eng of this office, telephone number (415) 556-7924.

Sincerely yours,

2 Incl
As stated

CHARLES R ROBERTS
Colonel, CE
District Engineer

II-A FEDERAL AGENCIES

2. RESPONSE OF FEDERAL AGENCIES

U.S. DEPARTMENT OF COMMERCE
Maritime Administration
WESTERN REGION
450 GOLDEN GATE AVENUE, BOX 36073
SAN FRANCISCO, CALIFORNIA 94102

September 1, 1970

Colonel Charles R. Roberts
District Engineer
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Reference is made to your letter dated August 21, 1970 addressed to the Western Region Director. We are designating Captain John W. Pullen, Region Ship Operations Officer, as coordinator for our office in the San Francisco Bay Area In-Depth Study. His address is:

Maritime Administration
Western Region
450 Golden Gate Avenue, Box 36073
San Francisco, California 94102
Phone: (415) 556-4160

In order to insure complete answers to the questions posed by the field level information requested under items a, b, c and d, we are forwarding your inquiry to the Assistant Administrator for Operations in Washington for reply.

We are very interested in participating fully in your study and we look forward to the opportunity of working with you.

Sincerely,

S. W. Galstan

S. W. GALSTAN
Assistant Director for Operations

U.S. DEPARTMENT OF COMMERCE
Maritime Administration
WESTERN REGION
450 GOLDEN GATE AVENUE, BOX 36073
SAN FRANCISCO, CALIFORNIA 94102

November 30, 1970

Colonel Charles R. Roberts
District Engineer
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Reference is made to your letter dated August 27, 1970 addressed to the Western Region Director.

Stemming from its statutory responsibilities for national port development as contained in Section 8, Merchant Marine Act of 1920, the Maritime Administration (MarAd) has a strong vested interest in a number of the study areas to be investigated by the San Francisco Bay Area In-Depth Study, and it is considered appropriate that we honor our earlier commitments.

Contingent upon the Corps of Engineers obtaining funds for reimbursing the participating Government agencies according to their respective budget estimates, we believe that MarAd should participate in the following areas of the Study as set forth in the matrix:

#1 Commodity Flow
#2 Transportation Systems
#3 Vessels and Port Facilities
#5 Social Well-Being Impact
#6 National Defense

One of our basic concerns is the precedent that tends to be established for the role and missions of various Government agencies, by virtue of the Corps of Engineers' utilization and adaptation of an ad hoc multi-agency planning matrix that was never coordinated and sanctioned by those affected. Based on our statutory responsibilities for both vessels and ports, we consider it appropriate for MarAd to be designated as the Study Area Coordinator for #3 Vessels and Port Facilities.

For your information, we are enclosing herewith a preliminary Draft Plan of Study for #2 Transportation Systems, #3 Vessels and Port Facilities, #6 National Defense and a Bibliography of Studies and Reports pertaining to the San Francisco Bay Region. When an agency study coordinator has been determined for #5 Social Well-Being Impact, we shall prepare appropriate draft plans of study for this study area as well.

As to revised time and cost estimates for MarAd's participation in the In-Depth Study, we envisage this participation to begin upon the distribution of funds authorized by Congress and would continue until completion of the final Study report. It is understood that this is roughly a four-year period, according to present estimates. Therefore, based on estimated CY 1971 costs, the costs for MarAd's participation are preliminarily estimated as follows:

Study Area		Four-Year Period Cost
Commodity Flow		$ 35,000
Transportation Systems		105,000
Vessels and Port Facilities		197,000
Social Well-Being Impact		9,000
National Defense		8,000
	Salaries	$354,000
	Support	6,000
	TOTAL	$360,000

Distribution of costs among the several study areas is shown below on an annual basis over the period of the In-Depth Study, although some change in emphasis (and cost) among the areas may develop as the Study progresses.

Study Area		Annual Cost
Commodity Flow		$ 8,750
Transportation Systems		26,250
Vessels and Port Facilities		49,250
Social Well-Being Impact		2,250
National Defense		2,000
	Salaries	$88,500
	Support	1,500
	TOTAL	$90,000 per year for four years

This preliminary information and revised estimates may be considered as MarAd's field level statement requested by you for the Detailed Plan of Study by December 4, 1970. Obviously the various costs are subject to adjustment within the total, when and if a reimbursable arrangement is worked out and cleared with Washington.

Sincerely,

T. J. PATTERSON, JR.
Western Region Director

Enclosures

U.S. Department of Commerce
Maritime Administration
November 13, 1970

SAN FRANCISCO BAY AREA IN-DEPTH STUDY

DRAFT PLAN OF STUDY

TRANSPORTATION SYSTEMS

Section	Description	Notes and Guidelines
I	Introduction and Summary	Define purpose and scope of study area and summarize its conclusions and recommendations.
II	Description of San Francisco Bay area Transportation Systems	Detailed discussion of the development of transportation facilities, including all land, air, and water transportation modes, which have influenced the existing development of the San Francisco Bay region and port systems.
III	Existing Transportation Development of the San Francisco Bay Complex	Discussion of the relationship of the transportation system serving the San Francisco Bay region with the existing and projected inter-port, inter-regional, and national transportation demands.
	a. Existing Transportation Improvements for theBay	Detailed description of projects, plans, and studies underway for transportation improvements.
	b. Existing Transportation Systems in the U.S. and Bay Area	Support DOT in undertaking inventory and analyses of transportation systems serving the United States providing for technological trends found pertinent from investigation. Prepare an inventory evaluation of land, air, and water modes of transportation and interfaces, including an appraisal of all transportation facilities and networks serving port and harbor areas in the San Francisco Bay region as to capacities and capabilities from inter-regional, intra-regional, and inter-port and harbor complex viewpoints, and the effects of all these on intermodal transfers.
IV.	Bargeline Transportation (Note, the outline for this Section is provided only as a sample guide in support of the DOT study coordinator who is assumed to be the one who will undertake the study of land and air modes)	In cooperation with DOT, assist in the analysis of the physical facilities required and economic considerations necessary for the transport, transfer, storage, and handling of various commodities involving those bargeline networks influencing the San Francisco Bay region. Analysis to include an evaluation of the entire west coast in relation to possible alternative routes and ports for various barge commodity movements.

Section	Description	Notes and Guidelines
	a. Existing Bargeline Developments	Assist DOT in preparing: (1) inventory of all primary and secondary bargeline networks of the west coast indicating route locations, present maximum operating capacities, conditions of facilities, maintenance requirements, efficiency of operations, and volume of cargo movements between various segments of each bargeline system; and (2) inventory and analysis of programs and plans for development of overall bargeline systems and facilities within the entire study area.
	b. Bargeline Transportation Needs	Detailed analyses of existing San Francisco Bay area bargeline transportation use plans to establish: (1) the adequacy of present plans to accommodate the barge traffic and supporting barge terminal facilities associated with various alternative development concepts and levels of commerce for the Bay area derived from commodity flow studies; and (2) the compatibility of existing regional transportation plans with various development alternatives concerning bargeline transportation requirements.
	c. Bargeline Systems in Intermodal Transportation Operations	Undertake analysis to establish: (1) operational capabilities, capacities, efficiency, and facilities involved in present barge intermodal operations related to vessels and port facilities; and (2) planned expansion and upgrading of bargeline facilities and operations necessary to increase intermodal capabilities for various levels of commodity movement in the San Francisco Bay region.
	d. Technological Change and Effect on Barge line Operations	Continue analysis undertaken in (c.) above to investigate the impact of possible technological innovations on barge terminal equipment and operations, and examine the factors influencing industry acceptance of innovation concerning all the physical and economic aspects of intermodal transportation, e.g., such concepts as the ocean barge carrier system - LASH, etc.
	e. Legal and Institutional Factors	Summarize existing legal and institutional factors pertinent to the San Francisco Bay region bargeline operations and possible improved regulatory procedures that would increase all levels of bargeline operations and intermodal transportation efficiency.

Section	Description	Notes and Guidelines
V	Railway, Highway, Air and Pipeline Transportation	Support DOT study coordinator, as appropriate, in the general discussion and analyses of these modes as they relate to the operational capabilities, capacities, efficiency, and facilities involved in present intermodal operations (primarily containerization) particularly as related to railway, highway, and port-related transportation.
VI	Combined Transportation Systems and Intermodal Operations	Overall discussion of transportation for the entire San Francisco Bay region in terms of a unified system for each of various alternative concepts, with particular concern for the optimum integration of all the transportation systems (vessels and ports, railroads, highways airports, and pipelines) within the objectives and criteria established by the major study items.
	a. Terminal Transfer and Interchange Facilities	Provide a general understanding of the type of transportation facilities associated with each of the major commodity movements in the San Francisco Bay region and the interchange complex between water and land modes of transportation which establishes the economics of the San Francisco Bay area transportation system.
	b. Intermodal Factors	Analyses of all intermodal factors associated with investigations of vessels and port facilities, railways, highways, and airport transportation, with emphasis on inter-city and intra-urban interface of land transportation systems feeding the regional port areas.
	c. Impact of Containerization on the West Coast and San Francisco Bay region	Detailed analyses of containership movements, types and sizes into and out of West Coast port systems and the San Francisco Bay system, in particular. Investigate the adequacy of container handling facilities and volume of commerce to warrant use of such facilities. Evaluation of locational advantages and disadvantages of individual ports and marine terminal facilities to handle intermodal container traffic on the west coast and Bay area , in particular, due to: (1) proximity to highways and direct connections with railroads; and (2) availability of land for expansion. Develop discussion of basic requirements to meet intermodal port functions

Section	Description	Notes and Guidelines
IV	a. Existing Vessel Developments	Prepare general inventory of: (1) existing worldwide cargo carriers for ocean transport by national flag categories; (2) existing coastal cargo carriers by national flag categories; and (3) existing internal cargo carriers of the San Francisco Bay region. Compile a selective worldwide inventory of under-construction, designed, planned, and potential cargo carriers for ocean transit, coastal transit, and internal transit.
	b. Vessel Sizes and Types Affected by Technological Change	Analyses of development of trends in vessel features (physical, manpower, capacity, etc.); vessel maneuvering requirements; and vessel investment and economic factors: all based on inventory data findings.
	c. Vessel Data	Describe basic data on vessel sizes, cargo handling configurations, propulsion modes and maneuvering capabilities. Detailed discussion of projected vessel utilization including technological trends, e.g., super-size vessels for use in bulk commodity shipment and containerization.
	d. Legal and Institutional Factors	Summarize existing legal and institutional factors associated with current vessel operations and construction and the compatibility of such factors with vessel trends.
V.	Commercial Port Facilities	Undertake analyses of existing and potential port facilities within the San Francisco Bay region based on accommodating vessel trends and commodity flow findings. Evaluate water terminal facilities and supporting operating areas allowing consideration for all factors related to existing developments, modernization potential, expansion potential, and the potential of new ports.
	a. Existing Marine Port and Terminal Facility Developments	Based on inventory data of: (1) existing port facilities and supporting areas; and (2) authorized or currently planned modernization and/or expansion programs for port facilities and supporting areas in the San Francisco Bay region, including estimated investment and economic factors, provide general understanding of the type of facili

Section	Description	Notes and Guidelines
		associated with each of the major commodity movements and the shoreside facilities required to serve vessels anticipated to utilize ports in the San Francisco Bay system to provide efficient cargo handling.
	b. Port Facility Needs	Detailed analyses of existing and potential port facilities within the San Francisco Bay region required to handle cargo and passengers indicating port and terminal capacities and capabilities based on accommodating vessel trends and commodity flow findings.
	c. Projections of Port Facilities Affected by Technological Change	Evaluate capabilities of existing, authorized, and currently planned port facilities and supporting areas to handle projected specialized and bulk cargoes resulting from technological advances, e.g., facilities related to containerization, supertankers, and ocean barge carrier systems requirements.
	d. Impact of Supersized Vessels on Ports and Terminal Facilities	Determine adequacy of channels; volume of commerce to warrant use of such vessels; and availability of shoreside terminal facilities to accommodate such vessels. Discuss future plans for accommodating supersize vessels in the San Francisco Bay port system; response of industry to low-cost transportation afforded by use of supersize vessels. Ascertain existing constraints against such vessels entering the San Francisco Bay system; steps needed to be taken in order to eliminate these constraints. Discuss problems that will evolve with introduction of supersize vessels in San Francisco Bay system.
	e. Alternatives to Shoreside Port Facilities for Accommodating Future Waterborne Commerce	Detailed analyses of advanced port and systems concepts, including offshore loading and unloading facilities, such as common carrier bulk discharge pipeline in deep water and ocean barge carrier type lightering operations.

Section	Description	Notes and Guidelines
	f. Evaluation of Offshore Terminal System Concepts	Evaluate more effective and economical ways to enable U.S. ports and ship operators to overcome the draft limitations which now prevent use of larger, and hence more economic, bulk carriers in appropriate trades. Adapt this discussion to the particular problems of the San Francisco Bay region to accommodating supersize vessels.
	g. Investment and Economic Factors	Summary analysis of economic factors associated with authorized, currently planned and potential port facilities and supporting area. Orient analysis toward investment and economic factors related to movement of waterborne cargo tonnage.
	h. Legal and Institutional Factors	Summarize existing legal and institutional factors pertinent to the San Francisco Bay region port facilities and supporting areas and the compatibility of such factors with potential developments.
VI	Independent Docking Facilities and Primary Storage Areas in the San Francisco Bay Region	Detailed analysis of existing and potential individual docking facilities and primary storage areas along existing and potential navigation channels of the San Francisco Bay region. Such facilities, primarily lead directly to industries handling materials and products requiring water transport, e.g., these types of developments are essentially located on the east side of San Pablo Bay, Carquinez Strait, Suisun Bay Channel and Napa River, Barge channels are included.
	a. Centralized Docking Facilities	Analyses of centralized docking facilities potential in the San Francisco Bay region, giving consideration to conceptual central terminals on land, in Bay-waters and in coastal waters for liquid bulks. Such plans reflect the potential of supersize vessels compatible with minimum disturbance of the environment.
	b. Existing Independent Docking Facilities and Primary Storage Areas in San Francisco Bay Region	Based on inventory data of: (1) independent docking facilities and primary storage areas; and (2) authorized or currently planned modernization and/or expansion programs for such facilities in the San Francisco Bay

Section	Description	Notes and Guidelines
		region, including estimated investment and economic factors, provide a regional evaluation of the capabilities of these facilities required to meet the findings of vessel trends and commodity flow in the Bay area.
	c. Investment and Economic Factors	Summary analysis of economic factors associated with authorized, currently planned and potential independent and centralized docking facilities with primary supporting areas. Orient analysis toward investment and economic factors related to movement of waterborne cargo tonnage.
	d. Legal and Institutional Factors	Summarize existing legal and institutional factors pertinent to San Francisco Bay region independent and centralized docking facilities with primary supporting areas and the compatibility of such factors with potential developments.
VII	Summary Evaluation of Navigation Goals, Opportunities, and Needs	Define the short and long term opportunities and needs for the San Francisco Bay system and outline a program for navigation development for the period 1970-2020, to meet the national, regional, and social objectives of the Bay area.

Maritime Administration
November 13, 1970

SAN FRANCISCO BAY AREA IN-DEPTH STUDY

DRAFT PLAN OF STUDY

NATIONAL DEFENSE

Section	Description	Notes and Guidelines
I	Introduction and Summary	Define relative role and requirements of the national defense, port emergency preparedness aspects of the study area.
II	Description of MarAd's Planning and Guidance with Respect to Developing Port Emergency Plans for the San Francisco Bay Region	Detailed discussion of the development of mobilization planning for ports, port systems and facilities, in the United States, its territories and possessions and how this relates to the national defense of the Bay Area; development of policies and procedures for procuring and operating merchant ships to meet the national ocean merchant shipping requirements for military, foreign assistance and emergency procurement programs, and those essential to the civilian economy, and, preparation of plans for claiming supporting manpower and material needed to carry out its emergency responsibilities.
III	Port Emergency Preparedness Program	Involves plans and programs for determining emergency port systems and facilities requirements; port expansion goals, program, and financial incentives; adequate port mobilization base; port supply and requirements; operation and security of port systems and facilities under partial and full mobilization and attack and post-attack conditions; use of alternate ports; and restoration of port in post-attack phase.
IV	Emergency Port Utilization and Control	Involves plans and programs for the emergency utilization and control of port systems and facilities, including the Federal emergency port control organization, the control functions to be exercised, and the emergency actions to be taken in pre-attack and post-attack situations.

Section	Description	Notes and Guidelines
V	Port Capacity and Capability	Undertake analysis of present and future capacities of ports and marine terminal facilities in the San Francisco Bay system in time of national crisis under varying levels of national defense requirements.
VI	Impact of Emergency Maritime Requirements on Commercial Navigation Facilities	Provide analysis of the effect of national defense maritime requirements on existing commercial marine port facilities. Should include a determination of optimum routing of traffic, assuming that one or more Bay area ports would be closed off.
VII	Description of San Francisco Bay Area Shipbuilding Facilities	Conduct survey of existing privately owned shipyards capable of merchant ship construction, conversion and repair to determine the capabilities, including facilities and skill personnel to handle operations under normal and national emergency conditions.
VIII	Summary of Evaluation of Emergency Planning Needs for Ports and Shipbuilding and Repair Facilities	Determine the short and long-term needs as related to navigation facilities (ports, ships, and shipbuilding-repair) to meet national defense planning requirements.

U.S. Department of Commerce
Maritime Administration
November 13, 1970

SAN FRANCISCO BAY IN-DEPTH STUDY

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* Clearinghouse for Federal Scientific and Technical Information ($3.00 per copy) 5825 Port Royal Road, Springfield, Virginia 22151.

** For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

U.S. DEPARTMENT OF COMMERCE
Office of Field Services
SAN FRANCISCO FIELD OFFICE
450 Golden Gate Avenue
San Francisco, Calif. 94102

September 4, 1970

Colonel Charles R. Roberts, C E
District Engineer, Corps of Engineers
Department of the Army
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Reference is made to your letter of 24 August 1970 concerning the "Preliminary Plan of Study of San Francisco Bay Area. Mr. Jeremy of this office will be the Commerce representative at the local level as far as the Field Services is concerned.

I am sure you will wish to also inform the Maritime Administration so that an appropriate representative from the Western Region can be appointed.

This information was phoned into your office before September 4, as established in your letter. Please let me know if I can be of further assistance.

Sincerely,

Philip M. Creighton, Director
San Francisco Field Office

U.S. DEPARTMENT OF COMMERCE
Office of Field Services
SAN FRANCISCO FIELD OFFICE
450 Golden Gate Avenue
San Francisco, Calif. 94102

September 1, 1970

Colonel Charles H. Roberts, U.S.
District Engineer, Corps of Engineers
Department of the Army
100 Pfeiffer Street
San Francisco, California 94102

Dear Colonel Roberts:

Reference is made to your letter of 24 August 1970 concerning the Preliminary Plan of Study of the Freeway for Life. Mr. Joyner of this office will be the Commerce representative at the local level as far as his field feasible is concerned.

I am also pleased to also invite the Marine Conservation as that an appropriate representative from the Western Region can be appointed.

This information was phoned into your office before September 1, as available in your letter. Please let me know if I can be of further assistance.

Sincerely,

Philip M. Frederick, Director
San Francisco Field Office

U.S. DEPARTMENT OF COMMERCE
Office of Field Services
SAN FRANCISCO FIELD OFFICE
450 Golden Gate Avenue
San Francisco, Calif. 94102

December 1, 1970

Col. Charles R. Roberts, District Engineer
U. S. Army Engineers District
100 McAllister St.
San Francisco, California 94102

Dear Col. Roberts:

This is in regard to your request of 28 Sept. 1970 for a cost estimate for our assistance to the Corps of Engineers in conducting the San Francisco Bay Area In-Depth Study, and the preliminary plan of study of the same name.

As a participant, our contribution will mainly be in data collection and analysis which will reflect the Washington, D. C. level components of Bureau of International Commerce, Office of Business Economics, and Bureau of Census and other related agencies.

Our provisional estimate would be approximately $125,000.00 (or $25,000 per year from July 1, 1971 to June 30, 1976).

This cost estimate would apply to the study items as listed in your preliminary write-up on commodity flow, plus other areas of study that we would be qualified to furnish data that you would need. This is contingent upon the Corps of Engineers obtaining funds for reimbursing the participating Government agencies according to their respective budget estimates.

This cost estimate may be considered as our San Francisco Field Office level statement requested by you for the detailed plan of study by December 4, 1970. Obviously, these costs are subject to adjustment when and if a reimbursable arrangement is worked out and cleared with our Washington office.

Sincerely,

Philip M. Creighton, Director
San Francisco Field Office

J. Jerry Jeremy

J. Jerry Jeremy, Chief
Domestic Trade Division

U.S. DEPARTMENT OF COMMERCE
Office of Field Services
SAN FRANCISCO FIELD OFFICE
450 Golden Gate Avenue
San Francisco, Calif. 94102

December 1, 1970

Col. Charles R. Roberts, District Engineer
U. S. Army Engineers District
100 McAllister St.
San Francisco, California 94102

Dear Col. Roberts:

This is in regard to your request of 23 Sept. 1970 for a cost estimate for our assistance to the Corps of Engineers in conducting the San Francisco Bay Area In-Depth Study, and the preliminary plan of study of the same name.

As a participant, our contribution will mainly be in data collection and analysis which will reflect the Washington, D. C. level responsibilities of Bureau of International Commerce, Office of Business Economics, and Bureau of Census and other related agencies.

Our provisional estimate would be approximately $125,000.00 (or $25,000 per year from July 1, 1971 to June 30, 1976).

This cost estimate would apply to the study items as listed in your preliminary write-up on commodity flow, plus other areas of study that we would be qualified to furnish data that you would need. This is contingent upon the Corps of Engineers obtaining funds for reimbursing the participating Government agencies according to their respective budget matrices.

This cost estimate may be considered as our San Francisco Field Office level statement requested by you for the detailed plan of study by December 4, 1970. Obviously, these costs are subject to adjustment when and if a reimbursable arrangement is worked out and cleared with our Washington office.

Sincerely,

Philip M. Creighton, Director
San Francisco Field Office

J. Jerry Jerome, Chief
Domestic Trade Division

U.S. DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

September 17, 1970

Colonel Charles R. Roberts
District Engineer
Department of Army
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Your letter of August 27, 1970 (SPNED-RD) to Dr. Eckler at our Los Angeles office was forwarded to me for reply. Since I discussed the matter at considerable length with Messrs. Eng and Erlich of the Task Force by telephone on September 4, this reply is mainly a confirmation of our willingness to assist insofar as feasible.

I note in the "Preliminary Plan of Study" (March 1969) that the Bureau of Census is listed as the "primary agency" for item 1(a) of the Commodity Flow phase. This phase appears to be concerned solely with the data collection and tabulation phase of commodity flows through the ports--specifically the domestic interior origins and destinations of U.S. foreign trade and coastwise trade. Since I don't know what is expected of the "primary agency," I would appreciate further information.

I suggested to Mr. Eng that he get in touch with the North Central Division of the Corps of Engineers (Mr. Howard Olson), since we undertook a survey for that office in 1956 and are now in the planning phase of another survey of the type you apparently are considering. I also took the liberty of discussing this by phone with Mr. Olson. These surveys are concerned with U.S. foreign trade. We have not had experience with coastwise shipping, but assume that some basis may be found for collecting data on that service.

Our function in both 1956 and the present survey is to be responsible for undertaking the survey (on a reimbursable cost basis) and creating computer tapes that the North Central Division (and Department of Transportation and others) may use for the variety of situation analyses they use in conjunction with related data obtained by them from other sources. While we usually provide technical advice, we do not undertake leadership in the economic analysis or application of results.

As mentioned to Mr. Eng, the presently planned survey for 1970 covers international trade from the 48 contiguous States and should supply considerable commodity flow data for your study, although a supplementation of the sample through the San Francisco Customs District would be desirable. The project is being jointly sponsored by the Department of Transportation and the Corps of Engineers.

Sincerely,

Donald E. Church

DONALD E. CHURCH
Chief, Transportation Division
Bureau of the Census

cc: Mr. Howard Olson

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

Address reply to:
Commander,
Twelfth CG District
630 Sansome Street
San Francisco, Ca.,
94126

11200
SER: 297-70
12 November 1970

From: Commander, Twelfth Coast Guard District
To: District Engineer, U.S. Army Engineer District, San Francisco

Subj: San Francisco Bay Area In-Depth Study; transportation responsibility

Ref: (a) Your ltr SPNED-RD dtd 8/24/70
(b) CGD12 ltr 5740/5 dtd 8/28/70

1. Reference (a) requested field level information for incorporation into the Detailed Plan of Study of the San Francisco Bay Area In-Depth Study. Reference (b) responded for the Coast Guard. Subsequently, the meeting of Federal agencies on 5 October amplified the procedures for developing the Detailed Plan of Study. The purpose of this letter is to identify responsibility for Office of the Secretary of Transportation coordination actions in this Study, and to amend the areas of participation by the Coast Guard.

2. The Secretary of Transportation has delegated to the Commandant, U.S. Coast Guard certain responsibilities for waterways, ports, harbors, and other water resource projects in Department of Transportation Order 6200.1. These responsibilities in the San Francisco Bay area further devolve to me as Commander, Twelfth Coast Guard District. The Regional Representative of the Secretary of Transportation, who facilitates overall performance of the Department here, concurs that the Secretary of Transportation is appropriately represented by the Coast Guard District Commander on the San Francisco Bay Area In-Depth Study. The Study also requires participation by several other elements the Department of Transportation, of course.

3. Accordingly, I have designated Captain Paul R. Peak, USCG of my staff as coordinator for this Office of the Secretary of Transportation participation in the In-Depth Study. In this capacity he will serve as Coordinator of the Transportation Systems Study and will participate in each of the other study areas including the Environment Study. He will also represent me on the Steering Committee, when formed.

CGD12 ltr 11200 SER: 297 dtd

4. I have further designated Captain Peak (telephone 556-6524) to serve as Coast Guard coordinator for this study, vice Lieutenant Commander F. E. Thrall. The Coast Guard should participate in the following areas of the study matrix:

(a) Previously listed (October 1970)

#3 Vessels and Port Facilities
#6 National Defense

(b) Not previously identified:

#1 Commodity Flow
#2 Transportation Systems
#4 Environment
#5 Social Well-Being
#7 Development Concepts.

Please amend the Federal Agency Participation Matrix to show this additional participation by the Office of the Secretary of Transportation and by the Coast Guard.

5. Time and cost estimates relative to this participation are the subject of separate correspondence.

Mark A. Whalen

MARK A. WHALEN

Copy to:
COMDT(CA)
Secretarial Representative, DOT
DOT Agencies
FHWA, FRA, FAA, NHSB, NTSB, USCG
Other Agencies participating in Transportation Systems Study
MARAD, ERS(Agriculture), OPSC(HUD), ICC, FMC

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

Address reply to:
Commander,
Twelfth CG District
630 Sansome Street
San Francisco, Ca.,
94126

7110/11200
SER: 319-70
3 December 1970

From: Commander, Twelfth Coast Guard District
To: District Engineer, U.S. Army Engineer District, San Francisco

Subj: San Francisco Bay Area In-Depth Study; final cost estimates

Ref: (a) Your ltr SPNED-RD dtd 8/24/70
(b) My ltr 7110/11200 dtd 11/12/70

1. Final field level time and cost estimates for field agency participation in the San Francisco Bay Area In-Depth Study were requested by 4 December, 1970 by reference (a). Reference (b) reported preliminary estimates for Coast Guard participation both representing the Secretary of Transportation and on its own responsibility. This letter contains the final Coast Guard field level estimates, developed following the 25 November meeting of the Transportation Systems Study group.

2. On 25 November a new draft of the Transportation Systems Study was distributed, and agency responsibilities were discussed and identified. The Coast Guard will be responsible for coordination of this Transportation Systems Study, and, further will undertake the additional analyses and investigations thereunder identified by the caption "Unified Transportation Systems and Intermodal Operations." As a result, this final cost estimate includes four additional man years of effort on this Transportation Systems Study. In addition, the Coast Guard will also participate in each of the other six study groups.

3. Coast Guard participation in the In-Depth Study will begin upon authorization of funds and will continue until the steering committee completes the draft of the main report. The level of effort is essentially uniform over this four-year period.

4. a. The estimates following are based on FY 1970 costs.

b. One-time costs are those required to provide office equipment at the initiation of the study. They are estimated at $1,500.

c. Costs recurring annually are estimated at:

Personnel (two professional and one clerical position)	$42,000.
Support (office space and services supplies, travel)	4,000.
Consultant and contract	None
Annual total	$46,500

d. This annual total is now estimated to be distributed among the several study areas as follows:

Study Area	Annual Estimate
Commodity Flow	$ 2,000.
Transportation Systems	29,500.
Vessels and Port-Facilities	5,000.
Environment	3,000.
Social Well-Being	2,000.
National Defense	2,000.
Developmental Concepts	3,000.
Annual Total	$ 46,500.

e. The total cost estimate for Coast Guard participation both representing the Secretary of Transportation and on its own responsibility is:

Recurring, $46,500 per year X four years=	$186,000.
Non-recurring (required first year)	1,500.
	$187,500.

Mark A. Whalen

MARK A. WHALEN

Copy to:
COMDT (CA), (CCS), (A)
Transportation Systems STudy Members
FAA, FHWA, FRA, MARAD, Agriculture, HUD, ICC

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

Address reply to:
COMMANDANT (AWL)
U.S. COAST GUARD
WASHINGTON, D.C.
20591

30 DEC 1970

Colonel Charles R. Roberts
District Engineer
San Francisco District, Corps of
Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

In regard to the San Francisco Bay Area In-Depth Study, the preliminary plan of study has been reviewed. As indicated to you in recent correspondence from Rear Admiral Whalen, Commander, 12th Coast Guard District, the Department of Transportation is prepared to assist and participate in this study to the fullest extent possible.

Accordingly, the following personnel are designated as the Department of Transportation representatives to the study:

Primary representative

Rear Admiral Mark A. Whalen, USCG
Commander, 12th Coast Guard District
630 Sansome Street
San Francisco, California 94126

Alternate representative

Captain Paul R. Peak, USCG
12th Coast Guard District Staff
630 Sansome Street
San Francisco, California 94126

It is requested that all future correspondence, meeting notices, reports of meetings, etc. pertaining to the study be addressed to Rear Admiral Whalen.

The opportunity afforded the Department of Transportation to actively participate in the San Francisco Bay Area In-Depth Study is appreciated.

Sincerely,

T. R. SARGENT
Vice Admiral, U. S. Coast Guard
Assistant Commandant

U.S. DEPARTMENT O. TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION-REGION SEVEN
HIGHWAY PROGRAMS OFFICE
450 Golden Gate Avenue, Box 36096, San Francisco, California 94102

ARIZONA
CALIFORNIA
HAWAII
NEVADA

August 27, 1970

IN REPLY REFER TO:

730-00.2

Colonel Charles R. Roberts
District Engineer
Department of the Army
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

The Federal Highway Administration is looking forward to participating in the San Francisco Bay Area In-Depth Study. Our direct contribution to the study on the field level will be limited. Under the Federal-aid highway program, the States choose the system of routes for development and select and plan the individual projects to be built. Because the study will involve all levels of government, we will assume that the California Division of Highways will be invited to participate. We will be glad to make any contacts with the California Division of Highways you desire. In order to qualify for Federal funds for highway construction, the San Francisco Bay Area is required to have a comprehensive urban transportation planning process. This planning process is now being undertaken by the Regional Transportation Planning Committee (RTPC), P. O. Box 1023, Berkeley, California 94704. The RTPC estimates future need for transportation facilities and works with the different governmental agencies and special transportation districts in the development of a plan. Any study of transportation facilities in the San Francisco Bay Area should involve the Regional Transportation Planning Committee.

The Federal Highway Administration has an Economics Division in Washington, D. C., that we will be able to call on for assistance in the investigation under Item 6b.

Coordinator for this study, as requested in your August 27 letter, is Mr. D. E. Trull, Division Engineer, Federal Highway Administration, P. O. Box 1915, Sacramento, California 95809.

We would appreciate receiving, if available, four additional copies of the preliminary plan.

Sincerely yours,

J. W. WHITE
Deputy Regional Administrator

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION-REGION SEVEN
CALIFORNIA DIVISION

ARIZONA
CALIFORNIA
HAWAII
NEVADA

Federal Building, P. O. Box 1915, Sacramento, California 95809

September 11, 1970

IN REPLY REFER TO:
730-04.1

SUBJECT: San Francisco Bay Area "In-Depth Study"

Colonel Charles R. Roberts
District Engineer
Department of the Army
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

This is in response to your August 27 letter to Mr. S. E. Farin, Regional Federal Highway Administrator, concerning comments on the "Detailed Plan of Study" for the subject study effort. Mr. J. W. White, Deputy Regional Federal Highway Administrator, notified you of my appointment as coordinator in his letter of August 27, 1970.

The participation matrix indicates the Federal Highway Administration will be involved in studies of intermodal transportation and transportation economics. You indicate you wish information in four areas. Our comments in these areas follow.

a. The plan of study appears very broad and touches on all important aspects except the means of selecting alternatives or implementing the plan. We have found that attention to implementation through local participation, funding incentives, soliciting the power structure support and publicity is probably equally as important as the technical content of a comprehensive study. The basis for successful plan implementation lies in adequately identifying the goals and objectives of the affected area. This must be done at least concurrently with data inventories and prior to alternate plan preparation.

b. The areas of participation by the FHWA shown in the matrix appear appropriate and adequate. As described below, the FHWA direct input is negligible as we envision the study at this time.

c. Comprehensive, cooperative, continuing urban transportation planning, which has been supported both with Federal-aid highway funds and technical assistance from FHWA, has amounted to over $6 million in the Bay Area over

the past seven years. A significant portion of this work has gone toward population, employment, land-use, and economic studies on a region-wide basis. It would be unfortunate if this information could not be used as the foundation for the "In-Depth-Study."

Of more significance than the available data; however, is the available planning organization.

From your "Preliminary Plan of Study" it is apparent that you have seen the need for a comprehensive approach, that actions by a myrad of diverse groups interact to affect projects and plans. If these actions are not guided by the "comprehensive plan," the total affect that the plan hopes to achieve can not come about and planning then is only an exercise. If there are a series of "comprehensive plans" developed by various interests (highway, port, airport, pollution control, etc.) the influence of any one is diluted by the effects of the others. The thousands of development decisions made each day in the region can find no generally accepted plan on which to be based.

The Association of Bay Area Governments (ABAG) is recognized by most of the San Francisco Bay communities, the Department of Transportation and the Department of Housing and Urban Development as the Region's central planning authority. ABAG has adopted a regional comprehensive plan. Highway, transit, airport, and port authority planning have developed segments of the ABAG plan and continue to refine these segments within the context of the overall plan.

It is strongly urged that the "In-Depth-Study" be organized as a substudy under the ABAG plan. This would permit the use of an existing data, provide a forum for identifying goals and obtaining reactions of local groups, and strengthen a logical vehicle for implementation of planning results.

d. From our viewpoint, investigations of highway transportation pertinent to the "In-Depth Study" are already underway.

The highway segment of the ABAG plan is being refined by a subcommittee of ABAG known as the Regional Transportation Planning Committee (RTPC). This committee has taken over the function of the Bay Area Transportation Study Commission (BATSC) whose work began in 1963. The staff for RTPC is primarily made up of California Division of Highways planners. A major portion of the funding is supplied through the Federal-aid highway program. This group has operating models which permit it to test the affect of various land-use activity assumptions and highway/transit networks region-wide.

If the "In-Depth Study should develop improved information on land-use activity in certain areas such as newly developed ports and/or significant changes in port activity with resulting demands for highway capacity, these factors can, relatively easily, be inserted in the model

and network solutions to these changes tested. We would anticipate no new funding sources would be required as this is a typical function of the ongoing study.

If more detailed studies, such as truck terminal facilities, cargo handling facilities, etc., are contemplated as a responsibility of FHWA, we have no funds or organization for this purpose. The most logical approach for this type of work from our viewpoint would be through planning consultants. The costs can not be estimated without more complete definition of the program.

We believe the In-Depth Study can be a significant positive influence in the San Francisco Bay Area if used to strengthen existing planning and regional continuity. If developed as an independent entity it could create more problems than it would solve for the Bay Region as a whole.

If you believe we can be of further assistance to you, please do not hesitate to contact me. My phone number is 916-449-2428.

Sincerely yours,

Donald E. Trull

DONALD E. TRULL
Division Engineer

ARIZONA
CALIFORNIA
HAWAII
NEVADA

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION — REGION SEVEN
HIGHWAY PROGRAMS OFFICE

450 Golden Gate Ave., Box 36096, San Francisco, Calif. 94102

November 25, 1970

IN REPLY REFER TO:
730-00.2

Colonel Charles R. Roberts
District Engineer
Department of the Army
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Enclosed is the time and cost estimate for Federal Highway Administration participation in the San Francisco Bay Area In-Depth Study. The estimate is based on the description of the highway transportation element provided by Lieutenant Michael Cobb and the following assumptions:

1. The existing regional transportation planning of the Bay Area, including goals, objectives, and land use projections will be acceptable for In-Depth Study purposes.

2. The transportation planning of the Bay Area consisting of work by BATSC, RTPC, MTC, and ABAG will be developed to the systems analysis phase by the time In-Depth Study inputs are available.

3. The levels of commerce and port development will be made available to the highway analysis in terms of ADT OD trip tables.

4. The end product of the highway systems study will be identified corridor needs with gross cost estimates.

5. The highway facility needs portion of the study cannot begin until the inputs of (3) are available. This means commodity flow and general outlines of the port facility studies must be completed.

6. Two years is being estimated as the time required for a detailed analysis as shown in the attached flow chart. If feed-back and iteration are involved, a longer period will be required. The 2-year schedule begins when the inputs mentioned in (5) are available.

7. At least 18 months lead-time will be required to allow the California Division of Highways and the Regional Transportation Planning Committee to plan, budget, and implement any specific programs. This again is approximately 18 months prior to beginning the 2-year schedule mentioned in (6).

8. One FHWA employee (in the category of a GS-13 Highway Planning Engineer) will be assigned as full-time coordinator for the highway systems portion. Two additional highway planning engineers will be furnished for approximately 4 months each.

We have no firm commitment from the Division of Highways or the Regional Transportation Planning Committee/Metropolitan Transportation Commission to enter into the contract envisioned under Item c of the estimate. The study has been discussed with the Division of Highways, and they are willing to cooperate within the limits of their capabilities and administrative/budget constraints.

Because of the Federal interagency nature of the study, the Federal Highway Administration coordination will be retained by this office instead of Mr. D. E. Trull who was designated in our August 27 letter. Coordinator for this study is Mr. R. S. Young, Chief, Planning and Research Division (telephone number: 556-4696).

Sincerely yours,

H. R. Anderson

J. W. WHITE, Director
Highway Programs Office

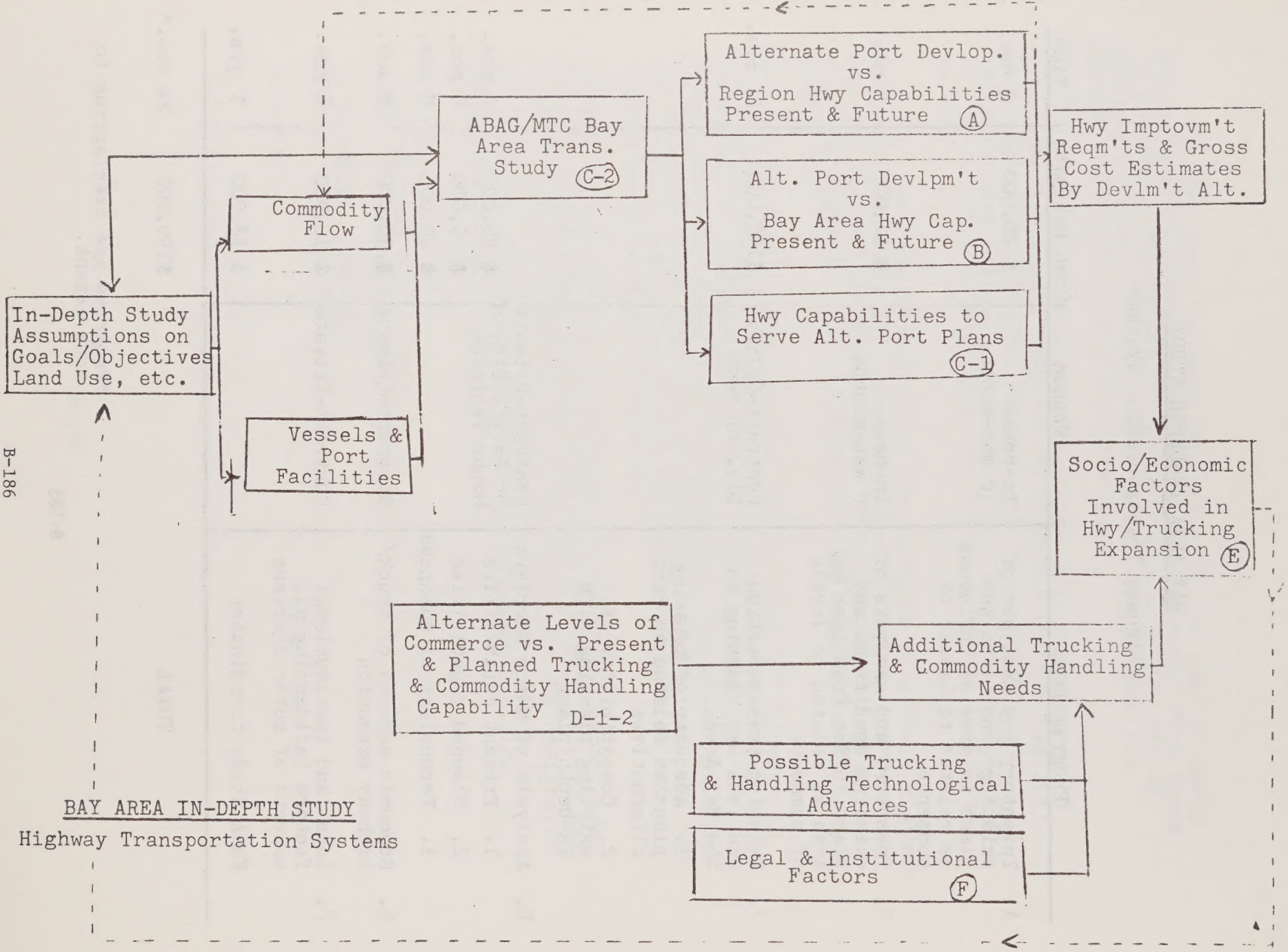
Enclosures

BAY AREA IN-DEPTH STUDY

Highway Transportation Systems

Program Item	Method	Cost Estimate	Time
A. Inventory and analysis of existing conditions and plans in area of influence as related to levels of commerce	In-house 10 man-months	$ 20,000	4 mos.
B. Inventory and analysis of existing conditions and plans in San Francisco Bay Area as related to levels of commerce	In-house 6 man-months	$ 12,000	3 mos.
C. Existing transportation and land-use planning in the Bay Area	Contract-Calif. Div. of Hwys	$150,000	18 mos.
1. Adequacy of existing plans as related to port alternatives			
2. Compatibility of existing planning with In-Depth plans			
D. Analysis of Motor Carriers	Contract-Private or Calif. Div. of Motor Vehicles		
1. Present capabilities		$ 20,000	6 mos.
2. Planned capabilities		$ 30,000	6 mos.
3. Technological advances		$ 40,000	8 mos.
E. Economic aspects of truck/highway expansion	Contract-Private	$ 30,000	6 mos.
F. Legal and institutional factors influencing all aspects of motor carriers	Contract-Private	$ 30,000	6 mos.
FHWA Study Coordinator		$ 58,000	3 yrs.
TOTAL		$390,000	24 mos.*

*Programs are overlapping to some extent.



BAY AREA IN-DEPTH STUDY

Highway Transportation Systems

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION
450 Golden Gate Avenue, Box 36108
San Francisco, California 94102
September 4, 1970

REGION SEVEN
San Francisco, California

Colonel Charles R. Roberts
Department of the Army
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

In reply to your letter of 27 August 1970, on the subject of the San Francisco Bay Area In-depth Study, I would advise that Mr. L. A. Straight of this office be designated as our coordinator for the study.

I have no suggestions for any additional study items other than those already defined in the plan.

For your information we have a very small staff in San Francisco and do not have any planning or research people. However, I believe we can supply an input of some of the requested information on the Intermodal Transportation study. With reference to the Transportation Economics study I would suggest that the Interstate Commerce Commission would be a more appropriate source for this information.

We have no ongoing investigation relating to the study at this time nor am I in a position to submit a time and cost estimate as of this writing. I feel however that it will be a minimal item. I will advise you further on this matter.

If you have any questions as to our participation, please feel free to call Mr. Straight at our office phone 556-6411.

Sincerely yours,

A. L. Hynes
Regional Director

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION
450 Golden Gate Avenue, Box 36108
San Francisco, California 94102
December 2, 1970

REGION SEVEN
San Francisco, California

Colonel C. R. Roberts
District Engineer
Corp of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

I am forwarding time and cost estimates for the Federal Railroad Administration participation in the Bay Area In-depth Study.

The initial estimate amounts to a total of $225,000 for a three year period and includes the costs necessary for private contracts, planning and consultant services. Coordination costs are not included in the above.

75% of the estimated study time period would be required for the following:

Review and analysis of existing San Francisco Bay Area and West Coast railroad transportation and land use plans.

Analysis of West Coast railroad intermodal operations.

Economic factor analysis associated with expansion and/or improvement of railway operations on the West Coast.

Analysis of legal and institutional factors.

Analysis of all West Coast railroad capabilities and alternative routings.

The balance of the estimated study time would be devoted to the Pipeline Systems study.

Sincerely yours,

A. L. Hynes

A. L. Hynes
Regional Director

cc:
Lt. Michael Cobb
Capt. Paul R. Peak

DEPARTMENT OF TRA..PORTATION
FEDERAL AVIATION ADMINISTRATION

SAN FRANCISCO AREA OFFICE
831 MITTEN ROAD
BURLINGAME, CALIFORNIA 94010

4 SEP 1970

Colonel Charles R. Roberts, CE
District Engineer
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Pursuant to your letter of 27 August 1970 regarding the San Francisco Bay Area In-Depth Study, I have designated our Airport Planner, Mr. John (Les) Hopkins, as FAA coordinator to work with your office on this study. Mr. Hopkins can be reached at the above address on (415) 692-2441, extension 289.

We will comment on our input to the study as delineated on page 2 of your letter within the 21 September 1970 deadline you have established. It would appear at this time that our principal input will be an inventory of the existing airport facilities in the San Francisco Bay Area and a presentation of their future plans for expansion. In addition, we can discuss the aviation needs of the Bay Area as recommended in the National Airport System Plan and the Study of Aviation Requirements now underway by the Association of Bay Area Governments. This latter study is directed by Mr. Walter Gillfillan whose office is in the Hotel Claremont in Berkeley. This study referred to as the Bay Area Study of Aviation Requirements (BASAR) project is financed with Department of Housing and Urban Development and local funds and will, when completed, become the general framework for future planning of the airport system for the San Francisco Area.

We welcome the opportunity to contribute to the Bay Area In-Depth Study.

Sincerely,

for Donald E. Pearson
H. E. ALDRIDGE
Area Manager, SFO-1

DEPARTMENT OF TR SPORTATION
FEDERAL AVIATION ADMINISTRATION

SAN FRANCISCO AREA OFFICE
831 MITTEN ROAD
BURLINGAME, CALIFORNIA 94010

17 SEP 1970

Colonel Charles R. Roberts, CE
District Engineer
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

In a discussion today with Second Lieutenant J. Michael Cobb regarding the San Francisco Bay Area In-Depth Study, we understand you want an outline of what our input will be on this study.

As mentioned in our correspondence of 4 September 1970 we will provide you with:

(1) Inventory of air carrier aviation facilities in the Bay Area.

(2) Capacities of these facilities.

(3) Forecast of the volume of passenger, cargo and mail traffic in the Bay Area for 1975, 1980 and 1985 with general estimates for the year 2000.

(4) Future plans for airport expansion.

(5) Plans for future aviation projects which would involve bay fill.

We do not foresee a need to conduct new investigations to complete the aviation segment of your Bay Area In-Depth Study.

Sincerely,

Donald E. Pearson
for H. E. ALDRIDGE
Area Manager, SFO-1

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

SAN FRANCISCO AREA OFFICE
831 MITTEN ROAD
BURLINGAME, CALIFORNIA 94010

4 DEC 1970

Colonel Charles R. Roberts
District Engineer, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Enclosed is the time and cost estimate for Federal Aviation Administration's participation in the San Francisco Bay Area In-Depth Study. The estimate is based on the description of the airport transportation element provided on 25 November 1970 by Lieutenant Michael Cobb and the following assumptions:

1. Maximum use will be made of existing San Francisco Bay Area studies such as that now underway by Association of Bay Area Governments (ABAG) with the further assumption that this study will be completed before undertaking the In-Depth Study.

2. The projected levels of population, employment and income for the 14 county area will be provided by the Corps of Engineers.

3. The Air Transportation segment of the In-Depth Study is estimated to take two years after the projected activity levels are provided. A longer period will be required if recycling the alternatives is required by a changed forecast in the economic activity.

4. Planning facilities and services of our Regional Office at Los Angeles and of our Area Office at San Francisco will be used to the maximum to assist in the In-Depth Study. However, two or more positions in our organization will be required including a Study Coordinator to administer the expected workload of the In-Depth Study. It is expected the study will cover a period of at least two years and it is our assumption that these additional positions will be over and above any FAA employment ceiling limitation current at the time of our participation in the study.

You will note that the majority of our estimated costs for participation in the In-Depth Study are for outside the agency contracts to cover the specific subjects you have included as allied to air transportation. The estimated costs of these contracts are to some extent based on similar type contracts of Phase I of ABAG's study of Bay Area Study of Aviation Requirements (BASAR) completed in 1969-1970. It should be recognized that as the study details become more refined and the specifications of the proposed contract are fully developed, some reduction in the cost estimates for these contracts may be possible.

The Federal Aviation Administration's coordination of this project will be handled locally by Mr. John L. Hopkins, Airport Planner (Telephone: 415 692-2441, extension 289).

Sincerely,

M. E. ALDRIDGE
Area Manager, SFO-1

Enclosure

cc:
Captain Paul Peak, U.S.C.G., S.F.
Mr. R. S. Young, Federal Highway Adm., S.F.

BAY AREA IN-DEPTH STUDY

Aviation Transportation

Program Item	Method	Cost Estimate	Time
A. Inventory Plans			
1. Airport - Assembled from ex-existing S.F. Bay Area Airport Studies, FAA data & publications.	In-house 4 man-months	$10,000	2 mos.
2. Airport - Highway Access Expansion of existing studies required to include military airports and expand study area to delta counties and central valley.	In-house 6 man-months	$12,000	3 mos.
	Contract - Private	$25,000	6 mos.
3. Passenger & Cargo Forecasts - Existing studies incomplete for study area. Additional surveys and research are required.	In-house 2 man-months	$ 4,000	1 mo.
	Contract - Private	$25,000	6 mos.
B. Analysis of airport plans to accommodate the anticipated volume of traffic at the various levels of commerce (commodity flow)	In-house 6 man-months	$12,000	3 mos.
C. Compatibility of existing airport, transportation and land use plans with various airport development alternatives to meet the various levels of economic activity.	Contract - Private	$80,000	12 mos.
D. Analysis of Airport and Aircraft Facilities as they relate to inter-modal transportation			
1. Present capabilities	Contract - Private	$20,000	6 mos.
2. Planned capabilites		$20,000	6 mos.
3. Possible Technoligical Innovations		$30,000	6 mos.
E. Economic factor analysis for developing air transportation facilities with intermodal capabilities at various activity levels while considering environmental and social well being objectives.	Contract - Private	$40,000	6 mos.
F. Legal and institutional factors influencing all aspects of air transportation	Contract - Private	$30,000	6 mos.
FAA Study Coordinator		$42,000	2 yrs.
TOTAL		$350,000	24 mos.

UNITED STATES
DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION
PACIFIC SOUTHWEST REGION

In replying address:
DIRECTOR—PACIFIC SOUTHWEST REGION
U. S. DEPT. OF INTERIOR—FWPCA
760 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94102

OCT 23 1970

Colonel Charles R. Roberts
District Engineer
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Effective November 1, our coordinator for your In-Depth Study of San Francisco Bay will be:

Philip C. Woods
California/Nevada Basins Office
620 Central Avenue, Building 2C
Alameda, California 94501

Mr. Woods' telephone number is 415-273-7011. This is an FTS line as well as a commercial line.

Sincerely,

CLEAN WATER

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
FEDERAL WATER QUALITY ADMINISTRATION

PACIFIC SOUTHWEST REGION
760 Market Street
San Francisco, Calif. 94102

DEC 14 1970

Your reference
SPNED-RD

District Engineer
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Sir:

Reference is made to your 27 August 1970 letter regarding the San Francisco Bay Area In-Depth Study, our reply of 31 August and our verbal preliminary input of 21 September 1970.

In accordance with the items listed in your 27 August letter, the following preliminary field level information is provided for your consideration for incorporation into the Detailed Plan of Study:

a. No additional items of study are recommended for the investigation; however, additional definitions of currently identified study items have been prepared. These additional definitions are outlined in enclosure 1.

b. The area of participation by our agency indicated in the Preliminary Plan of Study is appropriate. Because of the great importance of this study to the bay area environment, FWQA should also be represented in the study element, "Evaluation of Alternatives at Different Levels of Development," particularly in study item c(1), "Environmental and ecological effects."

c. Information concerning our existing and planned investigations relating to this study is outlined in enclosure 2.

d. Preliminary time and cost estimates related to FWQA conduct of investigations pertinent to the In-Depth Study are included as enclosure 3. These estimates are contingent upon the availability of additional positions to our agency to conduct this work. In the event sufficient positions are not available, appropriate upward adjustments in cost estimates would be necessary to allow for contracts with others. All costs are to be reimbursable by the Corps of Engineers.

District Engineer
Corps of Engineers, San Francisco

As you know, FWQA has just been transferred from the Department of Interior to the Environmental Protection Agency. As the policies of EPA evolve, the extent of our participation in this study may require modification.

If you have any questions or comments relating to this preliminary information, please do not hesitate to contact this office.

Sincerely,

Paul De Falco, Jr.
Director

Enclosures 3
As noted

San Francisco Bay In-Depth Study

Enclosure #1

Additional definitions of environmental aspects of currently identified study items. September 1970.

3.c.(8) Environmental problems that will evolve as a direct result of introduction of super-sized vessels include those associated with increased navigation as measured by increased tonnage and/or numbers of vessels. There will be increased opportunity for spills including accidental discharges from vessels during loading and unloading, bunkering and lightering, or as a result of collision. These spills could consist of petroleum products or other cargo, ship fuel (including nuclear as well as fossil), sewage or bilge water. The study will determine if better precautions against spills and dumps from larger ships will be needed. The increased ship size would tend to increase the severity of the water quality impact resulting from any spill. The potential impact on water quality from spills in the various parts of the San Francisco Bay Area will be evaluated to determine which parts of the bay system can best accommodate larger vessels.

4.a.(2) Environmental and ecological studies must develop basic information regarding the relationships between regional port areas and waterways, hydrographic conditions in the bay system, and marine ecology and fish and wildlife. These studies will determine to what extent physical changes in the bay system have direct or indirect influence on land and water fauna. For example, a determination will be made regarding the possible interference with migration and spawning of fish as a result of channel modifications. Effects of both physical changes and resulting water quality influences on fish and associated fauna will be evaluated in all bay, river and coastal regions influenced by alternative study plans. Studies will evaluate the influence of channel changes and modification of sediment movement patterns in obliteration of benthic communities. Studies will determine whether physical alterations to the bay system are changing flow circulation and/or water quality to have significant impact on marine ecology and fish and wildlife. These changes will be evaluated at each section of the bay and influenced coastal area as well as for the bay as a whole system. These studies will also determine whether accumulative past changes have caused problems which should be mitigated as part of future developments, e.g., diminution of shellfishery.

4.b.(1) Environmental and ecological studies will develop basic information regarding the relationships between regional port areas and waterways, hydrographic conditions in the bay system,

water quality, and the various beneficial uses of bay, river, and associated coastal waters. These studies will determine the changes in water quality which result from increased channel depths. Indicators of water quality including turbidity, suspended sediment, toxicants and biostimulatory material which might be redistributed or redissolved during dredging operations or because of increased navigation will be investigated (see also 4c). The effect on water quality of excavation into confined or unconfined freshwater aquifers will be examined. The studies will ascertain to what extent deeper channels increase sea water incursion into freshwater areas such as the Delta, change receiving water conditions in the general vicinity of wastewater discharges, e.g., Stockton, and alter water velocity and current patterns with special reference to other projected hydrologic changes in the system. The water quality impact from channel deepening will be examined as a total effect of many successive deepenings as well as the incremental effect of a particular channel project. An example is the change in the ability of deepened channels to handle oxygen demand and transport of solids with the possible complicating influence of sea water incursion. An example in a specific location would be a solution to the question of whether the Sacramento Ship Channel should have a positive flow to maintain water quality.

4.c. The effects of dredging and spoil disposal on the greater bay system environment will be analyzed in its various aspects. Dredging to obtain increased channel and berthing area depths and for maintenance of desired depths has the potential for re-introducing various materials into the hydrologic system. Turbidity as well as other forms of solids may have deleterious influence whenever solids are put in motion, both because of their effect on water quality while resuspended and their effect on benthic ecology when they settle or are spoiled. These studies will include sampling of sediments for toxicants, e.g., mercury, lead, other heavy metals, pesticides, and radioactivity, and will determine to what extent and in what form toxicants and other materials are redistributed or redissolved when sediments are dredged and spoiled.

4.d.,e. The impact on the environment and ecology of the greater bay system resulting from specific alternative navigation developments and associated harbor and water oriented industrial operations and developments will be evaluated using the basic information and study methods developed under 4.a.,b.,c. Introduction of super-sized vessels will influence the location of various water-oriented industries. A secondary effect of the larger vessels then will be the shift of types and volumes of wastes discharged to particular portions of the bay and coastal area. A necessary part of these studies would be to determine to what extent the capacity of the various portions of the present and future sewerage systems would have to be modified to handle these associated waste loadings.

San Francisco Bay In-Depth Study,
Information on Existing and Planned FWQA Investigations
Relating to the In-Depth Study

Enclosure #2

Investigation	Status	Completion	FWQA Costs
Environmental Effects of Channel Deepening near Stockton, California (Stockton Ship Channel; CE, Sacramento District)	Planned	1/	$35,000*
San Francisco Bay - Delta Water Quality Control Program (FWQA Section 3(c) Grant to the State Water Resources Control Board)	Ongoing	6- 5-71**	398,494
Monterey Bay Regional Water Quality Control Planning Program (FWQA Section 3(c) Grant to the Association of Monterey Bay Area Governments (AMBAG))	Planned	Approx. 1-73	Under Negotiation
Studies for the State Water Resources Control Board and Regional Water Quality Control Boards in connection with their setting and revision of waste discharge requirements -survey design, sampling and lab work as requested and as our schedule permits.	Ongoing	-	-
Respond to some fish kills and oil spills	Ongoing	-	-
Continuing cooperative monitoring of water quality of bay inflows at Vernalis and Green's Landing. Plans for many additional stations re: water quality standards compliance	Ongoing	-	-

*To be reimbursed by Corps of Engineers
**Termination date for FWQA grant

1/ As scheduled

Enclosure #3

San Francisco Bay In-Depth Study,
Draft Outline of FWQA Participation

Summary	FWQA Resource Level
Spills - Determine the potential environmental and ecological impact of super-size vessels on the port environment of the San Francisco Bay Region because of projected increased opportunity for spills and the potentially greater magnitude of those occurring.	$12,000
Development of Water Quality Data - Development of basic data relative to the effect of waterborne commerce developments on the present status of water quality, marine ecology, and fish and wildlife resources in the San Francisco Bay and associated waterways and coastal waters.	52,000
Mathematical Model Development - Utilize existing estuarine models to examine the effects on water quality resulting from channel modifications for navigation purposes.	75,000
Long Term Effect of Navigation Construction on Flow Patterns, Sediment Movement, and Water Quality - Utilize information developed in other portions of the In-Depth Study along with that developed in this study segment to make a generalized evaluation of the influence of navigation works on water quality and the benthic community.	40,000
Aquatic and Terrestrial Effects of Dredging and Spoil Disposal - Determine the effect on water quality of moving fine sediments and associated contaminants from harbor and channel bottoms by dredging and spoil disposal. Investigate means of minimizing any deleterious effects on the water body.	70,000
Determine the Effect of Channel and Harbor Excavation on Ground Water - Utilize existing information and sufficient investigation to determine the effect of historic and proposed navigation improvements on ground water aquifers.	5,000
Overall Evaluation - Provide coordination of FWQA study segments, coordination of Environmental and Ecological Studies, and coordination between these studies and all other closely related parts of the In-Depth Study.	80,000
	$ 334,000

Enclosure #3

San Francisco Bay In-Depth Study,
Draft Outline of FWPCA Participation

Summary

	FWPCA Resource Level
Spills - Determine the potential environmental and ecological impact of super-size vessels on the port environment of the San Francisco Bay Region because of projected increased opportunity for spills and the potentially greater magnitude of those occurring.	$12,000
Development of Water Quality Data - Development of basic data relative to the effect of waterborne commerce developments on the present status of water quality, marine ecology, and fish and wildlife resources in the San Francisco Bay and associated waterways and coastal waters.	32,000
Mathematical Model Development - Utilize existing models to examine the effects on water quality resulting from channel modifications for navigation purposes.	75,000
Long Term Effect of Navigation Construction on Flow Patterns, Volume of Tidal Prism, and Water Quality - Utilize information developed in other portions of the in-depth study along with that developed in this study research to make a generalized evaluation of the impacts of navigation works upon water quality and the habitat community.	40,000
Estuarine and Terrestrial Effects of Dredging and Spoil Disposal - Determine the effect on water quality of covering from sediments and accompanying contaminants from the bottom and chemical outcome by dredging and spoil disposal. Investigate means of minimizing any detrimental effects on the water body.	70,000
Determine the Effect of Channel and Harbor Excavation on Inland Waters - Utilize existing information and additional investigation to determine the effect of dredging are proposed navigation improvements on ground water aquifers.	5,000
General Coordination - Provide coordination of FWPCA study activities, coordination of Environmental and Ecological Studies, and coordination between these studies and all other closely related parts of the In-Depth Study.	80,000
	$ 334,000

San Francisco Bay In-Depth Study,
Draft Outline of FWQA Participation

Study Segment: Spills

Objective: To determine the potential environmental and ecological impact of super-size vessels on the port environment of the San Francisco Bay Region because of projected increased opportunity for spills and potentially greater magnitude of those occurring.

Approach: The CE San Francisco Bay Model will be used for semi-quantitative evaluation of relative severity of spills in various parts of the bay. Wind rose studies will be made by season and area in the bay and associated coastal regions to determine relative vulnerability of critical areas to spills of materials less dense than water. Mathematical modelling will be used for materials that mix with water. Solubility information will be compiled for some potential spill materials using published data where possible and lab analyses where data is unavailable. Better precautions for navigation and cargo handling will be developed. Channel depths limitations will be recommended to minimize risk in parts of the bay region where conditions are such that a spill would have particularly serious effect on the environment.

Related Work: Maximum potential spill magnitude vs. location information will be supplied by other study items of the In-Depth Study. Corps of Engineers will operate the San Francisco Bay hydraulic model. Coast Guard will develop precautions based on study determinations. Costs of mathematical modelling are indicated in Mathematical Model Development.

Resource Level (FWQA):

Man-Years - 0.6 Total Costs -$12,000

Study Segment: Development of Water Quality Data

Objective: Development of basic data relative to the effect of waterborne commerce developments on the present status of water quality, marine ecology, and fish and wildlife resources in the San Francisco Bay and associated waterways and coastal waters.

Approach: Existing water quality data will be compiled and analyzed for the area of study. Field studies limited to specific areas and parameters will be conducted for model verification and to confirm prototype trends in water quality indicated by analysis of existing data.

Existing data on marine ecology as well as fish and wildlife resources will be compiled, analyzed, and related to water quality for the area of study. Field surveys of channel conditions and selected shallows and coastal waters will be made as necessary to supplement existing data.

Related Work: Selected areas for emphasis, particularly in coastal waters, will be supplied by other study items of the In-Depth Study early enough to accomplish the necessary field studies of existing conditions. Fish and Wildlife Service will conduct the portions of this study item relating to marine ecology and fish and wildlife.

Resource Level (FWQA):

Man-Years - 2.8 Total Costs - $52,000

Study Segment: Mathematical Model Development

Objective: Utilize existing estuarine models to examine the effects on water quality resulting from channel modifications for navigation purposes.

Approach: The CE San Francisco Bay Model will be used for semi-quantitative screening of the effect on flow patterns due to historic and proposed channel modifications in the bay and delta. Existing computerized mathematical models will be used to determine changes in flows, and resulting effects on water quality, which have taken place or can be expected to occur in the future because of various combinations of flow and channel modifications. Studies will investigate how significantly the cutting of channels reduces circulation in shallower areas. Maintenance of minimum flows, artificial addition of dissolved oxygen, and nutrient removal will be evaluated as means to mitigate the effects of changed circulation. Problems of reduced waste assimilation capacity because of increased sea water incursion and reduced flows will be investigated for specific reaches of the bay system. Specific examples for these studies are the Sacramento Ship Channel and a continuation of Stockton Ship Channel studies westward from the proposed FWQA study limits. Historic and proposed channel modifications and associated flow changes will be evaluated to determine whether these modifications have caused or will cause interference with migration and spawning of fish. The water quality impact of channel deepening will be examined as a total effect of many successive deepenings as well as the incremental effect of a particular channel project.

Study scope will be limited to dissolved oxygen-nutrient modelling of two specific reaches plus several evaluations of the greater bay system for movement of spills and for the effect of flow changes on movement of conservative and semi-conservative constituents.

Related Work: Channel depth and configuration information, maximum potential spill magnitudes, and water quality data for model verification and confirmation of prototype trends will be supplied by other study items of the In-Depth Study. Corps of Engineers will operate the San Francisco Bay Model. Fish and Wildlife Service will conduct the portions of the study evaluating the influence of flow and water quality changes on migration and spawning of fish.

Resource Level (FWQA):

Man - Years - 3.5 Total Costs -$75,000

Study Segment: Long Term Effect of Navigation Construction on Flow Patterns, Sediment Movement, and Water Quality

Objective: Utilize information developed in other portions of the In-Depth Study along with that developed in this study segment to make a generalized evaluation of the influence of navigation works on water quality and the benthic community.

Approach: The CE San Francisco Bay Model will be used to screen channel modifications, historic and proposed, for their effect on current and potential sediment movement. Field tracing will be done in selected problem areas to verify indicated progressive changes in bottom conditions. The loss of benthic communities will be investigated to determine why some communities are being obliterated. The relationship between circulation changes, sediment movement, and waste loads including sewage borne bacteria and conditions in the benthic community will be investigated. Specifically the loss of shellfishery will be studied. Questions of whether smothered natural organisms can become re-established or if there can be compensation for losses will be studied. Mitigation of damages by hydraulic, hydrologic and waste management means will be evaluated.

Examination of existing data, results of current Stockton Ship Channel studies, and field investigations and mathematical modelling done as part of the In-Depth Study will make the evaluation of the effects of changed channel configuration on water quality possible. Some guidelines for relationships between hydrographic changes and various water quality parameters will be delineated.

Changes in the water quality of open bays and coastal areas due to changed hydrographic conditions and resulting modifications of flow patterns will be studied. Other than development of some generalized information regarding effects on water quality, investigations will be limited to one carefully selected coastal area.

The impact on the environment and ecology of the greater bay system resulting from specific alternative navigation developments and associated harbor and water oriented industrial operations and developments will be evaluated using the basic information and study methods developed.

Introduction of super-sized vessels will influence the location of various water-oriented industries. A secondary effect of the larger vessels then will be the shift of types and volumes of wastes discharged to particular portions of the bay and coastal area. A necessary part of these studies will be to determine to what extent the capacity of the various portions of the present and future sewerage systems would have to be modified to handle these associated waste loadings.

Related Work: Historic and proposed channel depths and configurations, data concerning water quality, marine ecology, and fish and wildlife resources, and water quality modelling results will be supplied by other parts of the In-Depth Study. Corps of Engineers will operate the San Francisco Bay Model and perform field tracing studies of sediment movement. The San Francisco Bay - Delta Program, Associated Monterey Bay Area Governments studies, USGS studies of San Francisco Bay, and FWQA studies of Stockton Ship Channel will provide input to these analyses.

Resource Level (FWQA):

Man-Years - 2.0 Total Cost - $40,000

Study Segment: Aquatic and Terrestrial Effects of Dredging and Spoil Disposal.

Objective: To determine the effect on water quality of moving fine sediments and associated contaminants from harbor and channel bottoms by dredging and spoil disposal and to investigate means of minimizing any deleterious effects on the water body.

Approach: Existing physical and chemical data concerning the sediments of the bay system will be compiled and analyzed. In order to complete the characterization of bay sediments, necessary field sampling and lab analyses will be performed. Sampling of dredge discharge during maintenance dredging will be done where possible to maximize bay coverage with a minimum field and lab effort. FWQA sampling will be limited to areas of particular interest which will not be covered by routine dredging or sampling by others during the study period. Particular attention will be given to analysis for mercury, lead, other metals, pesticides, radioactivity and nutrients.

A very limited number of field measurement will be made down current from dredging and spoiling operations to complement earlier studies of redistribution and redissolving of material from sediments. The availability of stored materials to the hydrologic system if sediments are resuspended will be measured in the laboratory for selected bay sediments. Dissolution from the resuspended material will be measured, and, where possible, the form of this material will be determined so that its potential impact on the food chain can be evaluated. Some bioassay work will be included to provide spot confirmation of results projected from chemical analyses.

Ways in which the environment might be enhanced or, at least, damage minimized with spoil disposal will be studied. Proposals such as the following might have some application: 1) provide for diking of former islands, inundating with dredge spoil, settling, breaching protective dikes, and allowing the areas to return to marsh equivalent to pre-reclamation conditions. 2) provide for placing selected spoil on agricultural land and leaching as necessary, etc. As various methods have limited applicability, a variety of proposals will be evaluated for accommodating spoil material from new and maintenance dredging.

Related Work: Historic and proposed channel depths and configurations will be supplied by other parts of the In-Depth Study.

USGS and the Corps of Engineers will provide data concerning bay sediments; CE will arrange sediment sampling through its maintenance dredging program. The Corps of Engineers with the Fish and Wildlife Service will evaluate alternate methods of spoil disposal with FWQA interest concentrated on water quality effects.

Resource Level (FWQA):

Man-Years - 4.1 Total Cost - $70,000

Study Segment: Determine the Effect of Channel and Harbor Excavation on Ground Water

Objective: Utilize existing information and sufficient investigation to determine the effect of historic and proposed navigation improvements on ground water aquifers.

Approach: Existing data, including that compiled by the State and USGS, will be compiled and analyzed. Field test borings will be made as necessary to complete the location of aquifers beneath or through proposed channels. The long term effects of proposed channels on fresh water aquifers will be examined in conjunction with information on projected ground water demands. Means to mitigate any deleterious influence on the aquifers such as channel relocation, aquifer sealing, artificial recharge, artificial barriers, etc., will be evaluated.

Related Work: Historic and proposed channel and harbor depths and configurations will be supplied by other items of the In-Depth Study. The USGS will perform most of this work with assistance from the Corps of Engineers. FWQA will only be concerned with the impact on water quality and on means to preserve water quality suitable for beneficial uses.

Resource Level (FWQA):

Man-Years - 0.25 Total Cost - $5,000

Study Segment: Overall Evaluation

Objective: To provide coordination of FWQA study segments, coordination of Environmental and Ecological Studies, and coordination between these studies and all other closely related parts of the In-Depth Study.

Approach: A FWQA representative will attend In-Depth Study meetings at various levels, coordinate task report preparation, evaluate results of studies being completed by other study participants to determine their relevance to Environmental and Ecological studies in general as well as to specific FWQA study items. The representative will coordinate Environmental and Ecological studies so that the impact on the environment of all proposed development plans can be evaluated and will aid in the integration of these Environmental and Ecological findings into the selection of the plan to guide the long range development of the San Francisco Bay Region.

Related Work: Essentially all other study items of the In-Depth Study and their related parts will be related to this work.

Resource Level (FWQA):

Man-Years - 4.0 Total Cost - $80,000

United States Department of the Interior

FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

730 N. E. PACIFIC STREET
P. O. BOX 3737
PORTLAND, OREGON 97208

Reference: RBS

September 2, 1970

Col. Charles R. Roberts
District Engineer
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Col. Roberts:

This is in response to your letter of 27 August 1970 (your ref: SPNED-RD). The work of this Bureau in connection with the San Francisco Bay Area In-Depth Study will be carried out largely by the Sacramento Area office of our Division of River Basin Studies. Mr. Kenneth E. Black, Regional Supervisor of the Division of River Basin Studies will be the coordinator for this office. His alternate will be Mr. William D. Sweeney, Associate Regional Supervisor of the Division. The telephone number of the Division is 234-3361, extensions 4047, 4048, and 4049.

We will endeavor to have our preliminary input for the Detailed Plan of Study to you by September 21.

Sincerely yours,

John D. Findlay

JOHN D. FINDLAY
Regional Director

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

ADDRESS ONLY THE
REGIONAL DIRECTOR

730 N. E. PACIFIC STREET
P. O. BOX 3737
PORTLAND, OREGON 97208

Reference: RBS

Your reference:
SPNED-RD
August 27, 1970

September 21, 1970

District Engineer
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Sir:

This is in further response to your letter. We have compiled the requested field-level information for inclusion in the San Francisco Bay Area In-Depth Detailed Plan of Study.

Item a -

Study items should be modified to read as follows:

a. Development of basic data on marine ecology and fish and wildlife as related to regional port areas and waterways.

(1) Marine ecology as affected by present and probable harbor alterations on marine life, aquiferous and land drainage patterns.

(2) Fish and wildlife as related to protection and enhancement of land and water fauna for sport and wildlife conservation.

(3) Fish and wildlife as related to protection and enhancement of commercial fish and shellfish conservation.

b. Development of basic data relating to effects development of regional port areas and waterways would have on fish and wildlife environment under future expected conditions of reduced water inflow to San Francisco Bay area.

(1) Effects of alterations of bay bottom topography on sediment transport, nutrient distribution and water quality as these affect fish and wildlife.

(2) Determination and evaluation of effects of shoaling rates resulting from a combination of man's activities and natural phenomena on fish and wildlife habitat.

c. Development of basic data on water pollution, esthetics and fish and wildlife oriented recreation as related to regional port development areas and waterways.

(1) Pollution as related to enhancing the quality and value of water resources, to assure the fulfillment of a national policy for the prevention, control and abatement of water pollution.

(2) Esthetics and recreation as related to the enhancement of the natural and scenic beauty and the restoration and development of port and harbor areas for these purposes.

d. Analyses of spoil excavated from harbors and channels as a potential problem from physical, biological and chemical aspects.

e. Analyses of the impact of beneficial and adverse effects on fish and wildlife resources resulting from alternative navigation developments.

f. Evaluation of ecological, environmental and recreational effects resulting from considered alternatives for improvements or modifications of harbor and water-oriented industrial operations and developments.

Item b -

Because of the expected reorganization of Federal agencies, participating agencies in study element 4 - "Environmental and Ecological studies" should probably be expanded to include the proposed NOAA (National Oceanic and Atmospheric Administration), EPA (Environmental Protection Agency) and Department of Commerce.

Item c -

No additional information has developed on existing or planned studies that may relate to all or part of this investigation.

Item d -

Preliminary field-level estimates indicate about ten years and two million dollars would be required to conduct pertinent fish and wildlife investigations pertinent to the In-Depth Study. We understand these estimates

are significantly greater than those included in your preliminary plan of survey which allocated $250,000 over a five-year period to complete the necessary investigations.

We will endeavor to provide a final field-level statement for the Detailed Plan of Study by December 4, 1970.

Sincerely yours,

Jack E. Hemphill

Jack E. Hemphill
Assistant
Regional Director

United States Department of the Interior

FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

730 N. E. PACIFIC STREET
P. O. BOX 3737
PORTLAND, OREGON 97208

Reference: RBS

December 3, 1970

District Engineer
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Sir:

This is in response to your August 27, 1970, request for a final field statement for Detailed Plan of Study of San Francisco Bay Area In-Depth Study. We understand that our participation will be as members of the Environmental and Ecological, Social Well Being Impact, and Development Concepts Study components.

We have reviewed a preliminary draft of your Environmental and Ecological Study element and have provided informal comments to your staff. With inclusion of these comments, which are basically editorial, the proposed study element will be sufficiently broad to include all foreseen and unforeseen areas of interest. We have not had an opportunity to review the other two study elements, but assume that they will provide about the same latitudes as the Environmental and Ecological Study element.

Our Division of River Basin Studies has expressed interest in broad participation in the Environmental and Ecological Study element including those items not directly related to fish and wildlife. It may be appropriate for our agency to assume prime responsibility for Biological phase of this study element as well as a portion of the Summary Studies. Participation in the Social Well Being Impact and Development Concepts Study components cannot be defined at this time although significant contributions will be made.

We understand that about 4 1/2 years will be required to complete the study. Based on this and an understanding of potential

participation, we estimate that about $250,000 would be required; $30,000 in FY 71, $40,000 in FY 72, $50,000 in FY 73, 74, and 75, and $30,000 in FY 76.

More detailed information regarding our participation will be developed as study items are formulated.

Sincerely yours,

Jack B. Hemphill

Assistant
Regional Director

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Geologic Division
345 Middlefield Road
Menlo Park, California
94025

August 31, 1970

Charles R. Roberts
Colonel, CE
District Engineer
Corps of Engineers
100 McAllister Street
San Francisco, Ca., 94102

Dear Colonel Roberts:

Your letter of 24 August 1970 addressed to the Pacific Region Engineer has been referred to this office. The principal activities of immediate interest in connection with the "Preliminary Plan of Study of San Francisco Bay Area In-Depth Study" perhaps are found within the cooperative study presently under way between the Geological Survey and the Department of Housing & Urban Development. I enclose a preliminary description that will acquaint you with the general scope and plan of this 3-year study.

Your letter requests by 4 September the name of a person who should be contacted to coordinate activities of this agency -- if appropriate -- with the study in which you are engaged. The Project Director, Geological Survey/Housing & Urban Development is the logical person and I suggest that you address future correspondence in this matter to Dr. Robert E. Wallace, Project Director, San Francisco Bay Region Study, U.S. Geological Survey, 345 Middlefield Road., Menlo Park, California 94025.

Sincerely yours,

John H Feth

John H. Feth
Acting Project Director,
San Francisco Bay Region Study

U.S. Department of Housing and Urban Development - U.S. Geological Survey
San Francisco Bay Region Environment
and Resources Planning Study

GENERAL SCOPE

A study of the physical environment and resources of the San Francisco Bay Region and their significance for improved urban and regional planning is being conducted cooperatively by the U.S. Department of Housing and Urban Development and the U.S. Geological Survey. The study emphasizes the disciplines of geology, geophysics, hydrology and topography which represent the core expertise of the U.S. Geological Survey and the pertinence and application of these disciplines to improved regional urban planning and decision making.

The U.S. Geological Survey has identified those parts of its ongoing program which are producing basic data most pertinent to the study and the Department of Housing and Urban Development is providing funds to augment the ongoing program so that a pilot study can be completed within 3 years. The goal of the study is to develop concepts, products and procedures which can significantly improve regional planning and development. Additional critical data are to be gathered and basic geologic, geophysical, hydrologic and topographic data are to be translated into documents and formats most useful in the planning decision-making process. The avenues of communication and coordination in the planning process are to be explored to find the most appropriate channels and methods for effectively applying the earth-science data.

The project is designed to meet major national as well as regional needs. By focusing this pilot study on the Bay Region, the Geological Survey hopes to identify those earth science parameters most important to urban development, to evaluate the research effort priorities of those parameters, and thereby to guide its national mission of seeking optimum use of earth resources by society. The Department of Housing and Urban Development hopes both to learn and demonstrate the significance of physical environment factors in the regional urban planning process. The urgency for this type of data is illustrated by the immediate need for guidelines on geologic hazards in HUD housing, planning assistance, and capital grants programs.

PROGRAM ELEMENTS

The following items or program elements will be produced, studied, or evaluated during the course of the project:

A. Physiographic Characteristics--

1:125,000-scale topographic base map
1:125,000-scale orthophotomosaic
1:7,200-scale urban orthophotomaps
1:125,000-scale slope map
1:125,000-scale reproducible molded relief model

B. Land Resources and Geological Problems (Exclusive of San Francisco Bay)

Areal geologic considerations (including a geologic map at 1:125,000 scale)
Engineering behavior of geologic units (e.g., slope stability and percolation factors)
Seismic response (e.g., relation of shaking to terrane categories)
Earthquake faults (including location, activity, and risk evaluation)

C. Land Resources and Geologic Problems (San Francisco Bay and Margins)

Geologic considerations (including three-dimensional mapping of sub-bottom units by acoustical profiling)
Engineering behavior of geologic units
Seismic response as related to configuration and properties of geologic units

D. Mineral Resources

Resource needs for urban development (including maps and alternate sources of supply)
Economic evaluation (e.g., conflicts with other land uses and impact of alternate sources of supply)

E. Water Resources

Availability and quality of water resources
Present and potential water demand
Water hazards (including flooding and pollution)
Sea, sea floor and sea margin considerations
San Francisco Bay waters (including relation of quality of Bay waters to use and distribution of water)
Planning and management considerations

F. Information and Education

G. Evaluation

PRODUCTS

Published maps, reports, and other material presenting, interpreting and evaluating the various elements of physical environment data are planned. A report and analysis of both the use and the significance of the data for decision making in the San Francisco Bay Region and a guide manual for the effective use of physical environmental information in urban planning and decision making will be final products.

The work will be reported in three numbered series of documents. One will consist of Basic Data Contributions. Another will consist of Technical Reports on the natural resources, and on the geologic and hydrologic features and processes that are of environmental concern. The third will consist of Interpretive Studies which will apply the basic data and technical reports to problems of urban development and land-use planning in the Bay region. Products will be released on a continuing basis and announcement of these releases will be distributed to interested parties.

COORDINATION WITH OTHER AGENCIES AND PROGRAMS

Many of the ongoing studies of the Geological Survey contributing to the San Francisco Bay Region project are being conducted cooperatively with other federal, state and local agencies, and serve other goals as well as the present project. Because of the regional aspect of the study, close coordination with the Association of Bay Area Governments (ABAG), and San Francisco Bay Conservation & Development Commission (BCDC) are planned. Planners from HUD and ABAG will work directly with earth scientists and engineers of the USGS. The study will be coordinated with but will not duplicate the efforts of other existing and evolving programs which are to consider local city- and county-level physical environment problems in the overall decision-making process. Also, because of the interrelation of the present study to other disciplines, and other public and private organizations, the U.S. Geological Survey will make every effort to have the project serve as a catalyst and a nucleus around which a variety of other regional planning efforts will develop.

FUNDING

The ongoing program of the Geological Survey which is most pertinent and contributory to the San Francisco Bay Region Study will represent an expenditure of $1.9 million over the 3-year period of the program. The Department of Housing & Urban Development is prepared to augment the ongoing program with an additional $1.2 million over the same period.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
345 Middlefield Road
Menlo Park, California
94025

December 4, 1970

Col. Charles Roberts
U.S. Army Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Col. Roberts:

We have received your outline for the proposed "In Depth" environmental study of the San Francisco Bay area, and have listed below those areas in which our ongoing research may contribute to your needs. It is our understanding that at this stage you are interested in a general statement of our possible fields of cooperation, and an estimate of costs. Then at some later stage we will discuss details of specific investigations.

Before listing items of interest, I should like to point out that many elements of our existing program in the San Francisco Bay area are directed toward the aims of your proposed study. These elements are: (1) the U.S. Geological Survey - HUD San Francisco Bay Regional Environment and Resources Planning Study (see item A below), (2) regional environmental mapping, (3) National Center for Earthquake Research programs, (4) ground water, surface water and subsidence studies by the Water Resources Division, and (5) a study of the water quality and sediment transport in the San Francisco Bay estuary. Considerable time and effort has been, and will continue to be invested in these studies. This affords the opportunity to benefit not only from the data that we already have, and will collect in the future, but also to benefit from data collected in the context of a larger already active study. In addition, participation in these programs would greatly reduce the expense to the Corps by avoiding costly duplication of extensive analytical and field support facilities.

Our participation in any single study item is in no way contingent upon your acceptance or rejection of the other proposed study items. Tentative budget figures are given at the end of the study item list. These budget estimates are based upon our interpretation of your brief description of the proposed investigations. Undoubtedly our budget figures will reflect differences in interpretation of the scope of individual studies. Thus, in most cases this letter constitutes a list of areas of mutual interest, and specific levels of funding can be adjusted to more accurate descriptions of program elements.

In the following, items are referred to by item letter, page and general heading as listed in the outline of the proposed environmental study. We have added some new study items that we believe you may wish to consider in your investigation. These are designated "New study items."

A (p. 3) Initial input

All six items listed for which criteria are to be established for development of study objectives are basic elements of on-going U.S. Geological Survey programs and the USGS-HUD San Francisco Bay Regional Environment and Resources Planning Study. Because of the similarity of general aims and the background that we have gained in these areas, it would be beneficial to have USGS participation in the establishment of the study criteria.

B2 (p. 4) Biota

At some time in the next 2 years we plan to make a quantitative study of the distribution of the dominant species of benthic communities throughout the entire estuary. When this study starts you may wish to discuss a cooperative arrangement.

B4 (p. 5)

Monthly measurements of nutrients and water quality that we are now making throughout the entire estuary (Rio Vista to the south end of the south bay) can provide a base line for this study. Our measurements include salinity, temperature, pH, dissolved oxygen, phosphate, nitrate, nitrite, carbon dioxide partial pressure, silica, chlorophyll a, turbidity and dissolved and particulate carbon. This study can be expanded to include more detailed study of areas where problems related to dredging might arise.

C1 (p. 5) Hydrology

A study of the geologic character and stability of Bay Area shorelines is now underway by the USGS. To meet the needs of the Corps environmental study, we suggest that these studies be extended to provide data on changes in patterns of shoreline and near shore erosion and sedimentation created by modern natural and man-induced processes (for example, gold dredge operations). Data would include sedimentation patterns deduced from shoreline and mud flat extension or erosion, modern methods of determining sediment origin, transport and ultimate deposition and associated changes in bathymetry.

C2 (p. 6)

We would provide data on flushing times and rates of dissolved and suspended particulate matter as indicated by observed changes of water quality, movement of seabed drifters and current velocity measurements. These data could be used in the prediction of the concentration of pollutants within the estuary.

C3 (p. 6)

A principal objective of our investigation of the San Francisco estuary is to establish the sources and rates of sediment supplied to the estuary, the modes of sediment transport, areas and rates of erosion and accumulation, and sediment exchange with the adjacent ocean. It is clear from our existing measurements (seabed drifters, turbidity, suspended particulate matter, etc.) that the sediment budget for any given area within the bay or the adjacent ocean is controlled by an "esturine circulation" mechanism that is modulated by seasonal change. In our judgment, items c and d (possible spoil dumping sites in the adjacent ocean and within the bay), must be evaluated in the field, by a study that examines sediment transport in the entire estuary and nearby ocean repeatedly throughout all seasons. Our observations which show that there are short term, rapidly changing bottom current movements in the adjacent ocean reinforce this view. We would augment our investigation to provide sufficient detail for the consideration of specific disposal sites.

C4 (p. 6)

The Water Resources Division of the USGS is at the present time designing a network of observation wells for monitoring the quality of ground water in areas adjacent to Suisun Bay. These areas border the Bay on either side of the route of a ship channel that the U.S. Army Corps of Engineers proposes to deepen. The proposed deepening could result in salt-water intrusion into aquifers that now contain fresh water.

The same situation pertains in areas adjacent to San Francisco Bay in ship channels near Redwood City and in the Sacramento area where deepening is contemplated. These areas should also be included in the Geological Survey observation network so that the present status of ground water quality can be determined, and so that surveillance of the quality can be effected.

However, before any dredging operations are undertaken in the Bay, the hydrological implications should be evaluated. This would require a detailed study of the geohydrology to determine the geology and the occurrence, movement, and quality of ground water in the areas of concern.

D1, D2 (p. 7) <u>Geology</u>

Item D1, a mineral resources inventory, is underway. It would require some expansion to assess resources outside of the nine Bay Area Counties, and to provide an analysis of the impact of navigation planning alternatives upon the economic factors that principally determine the value and developability of mineral resource deposits. We could also undertake D2, an analysis of the environmental implications of the various alternative resource development plans.

E1, E2 (p. 7) Physiography

The on-going Environmental geologic mapping program will define geologic constraints that bear on land use (and multiple use) decisions in the nine Bay Area Counties. These studies include such items as slope stability, soil erosion characteristics, active faults, topographic relief, natural resources, and historic, ecologic, scenic and aesthetic resources (a possible contribution to your Evaluation study). From these data, analysis of land use priorities and multiple uses of riparian lands (E1) and an analysis of alternative approaches to the utilization of land resources can be undertaken to meet your needs. For these purposes we would have to augment our environmental mapping program in the near shore coastal and some lowland areas and extend our studies into the Monterey Bay and other areas of Corps interest outside of the nine Bay Area Counties. The cost of this augmentation would depend on the exact site of these areas. Thus our estimate for this augmentation is only an approximation.

F1 (p. 8) Pedology

We can contribute to two aspects of your study of possible pollution problems related to the redistribution of bottom sediment during dredging and placement of spoils. These are baseline studies of the distribution of trace elements and nutrients by which it is possible to judge potential pollution problems. We have started a reconnaissance study of the trace element distribution in the surface sediments throughout the estuary. This study will be expanded to the adjacent ocean within the next month. In addition, we have examined changes in trace element concentration with depth in sediment cores to estimate the rates of trace element accumulation within the bay. We also plan to examine the interstitial water in cores. Analyses include Ag, As, B, Cd, Co, Cu, Hg, Ni, Pb, V and Zn. We are also determining trace element concentrations in the water column, in both the dissolved and particulate phases. As noted above (Bd) we are making routine near monthly analyses of nutrients in the water column throughout the Bay. We would like to examine nutrient levels in the bottom sediments as well. Both the trace element and the nutrient studies can be augmented to optimize the data for your specific needs.

New Study Items

Seismological studies

Evaluation of the seismic hazard is critical to regional land use planning or construction in the Bay Area, and therefore is considered by the State Senate's Joint Legislative Committee on Seismic Safty and in the plans of ABAG and BCDC, and in many county and private feasibility studies. Thus, some extension and augmentation of the U.S. Geological Survey's studies of seismic activity, amplification of earthquake ground motion by local geologic conditions, and active faults in the Bay Area may be of interest to the Corps. In particular, the Corps may wish to have these studies extended into the bay margin lands and channel areas as follows:

G1

Acoustic subbottom profiling (G1a) and some additional seismic monitoring stations (G1b) would yield critical data on the present activity of poorly known buried faults in the bay and delta regions, and determine the offshore position of these are the well known Hayward, Calaveras and San Andreas active faults with respect to existing and planned navigation channels, port facilities, bridges and tunnels.

G2

The installation of down hole seismometer arrays at two localities selected to typify port facility sites to determine the effect of natural bay margin materials on amplification and damping of earthquake induced ground motion. These instruments, together with an existing sophisticated installation in the vicinity of Dumbarton Bridge would permit the empirical and theoretical analysis of amplification characteristics of the thick unconsolidated sediment prism that underlies the Bay and most of its margins. This study would also contribute to elements C1, E1 and E2 of the Corps' program. This study would involve an observation period of approximately 3 years, computer data reduction, and theoretical analysis.

G3

Data which are now being developed on the seismicity and probable intensity of ground motion throughout the nine Bay Area Counties, as part of our on-going research, could be focused specifically on areas of interest, such as channel areas and harbor developments. Costs for such a study would be largely those for computer time.

Summary studies and evaluation

Although a region-wide environmental analysis is a part of the USGS-HUD San Francisco Bay Region Study, its application to the specific water transport objectives of the Corps' program is limited. The analysis could be expanded to achieve the objectives of the regional waterborne commerce study--regional population patterns, transportation routes, geologic and hydrologic constraints to development, etc. However, a better application of the results of USGS studies to the Corps program could be achieved by direct USGS participation in the core group that will seek to

summarize and evaluate the background studies and develop a comprehensive series of environmental principles to guide waterborne commerce policy.

Sincerely yours,

Robert E. Wallace

Robert E. Wallace
Project Director
San Francisco Bay Region Environment
and Resources Planning Study

Tentative budget

Item	Duration of study	Cost for first year	Cost for each successive year	Total
A	1 yr	18,000	-----	$ 18,000
B4	4 yrs	56,000	39,200	$ 173,600
C1	3 1/2 yrs	48,000	44,000	$ 158,000
C2	4 yrs	21,000	14,000	$ 63,000
C3	4 yrs	74,200	39,200	$ 191,800
C4	To be supplied			
D1-D2	2 yrs	-----	42,000 (2nd & 3rd)	$ 84,000
E1-E2	3 yrs	57,700	57,700	$ 173,000
F1	4 yrs	60,200	60,200	$ 240,800
G1a	1 yr	36,800	-----	$ 36,800
G1b	4 yrs	26,000	1,600	$ 30,800
G2	4 yrs	172,500	32,500	$ 270,000
G3	1 yr	-----	16,300	$ 16,300
Summary study and evaluation	2 yrs	-----	19,500 (3rd & 4th yrs)	$ 39,000

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Geologic Division
345 Middlefield Road
Menlo Park, California
94025

February 3, 1971

Col. Charles Roberts, District Engineer
U.S. Army Corps of Engineers
100 McAllister St.
San Francisco, Ca., 94102

Dear Colonel Roberts:

Pursuant to a discussion with Lt. Russell Flegal and Mr. P. C. Woods of Federal Water Quality Administration of the Environmental Protection Agency we are submitting the following study items for consideration in the "In-Depth Study" of San Francisco Bay, which was presented in more detail in my letter to you dated December 4, 1970:

Item 1. Biota Study

Monthly measurements of nutrients and water quality that will be carried out throughout the entire estuary (Rio Vista to the south end of the south bay) can provide a baseline for the Corps' study of the biota in the estuary. Measurements will include salinity, temperature, pH, dissolved oxygen, phosphate, nitrate, nitrite, carbon dioxide partial pressure, silica, chlorophyll a, turbidity and dissolved and particulate carbon. This study can be expanded to include more detailed study of areas where problems related to dredging might arise.

Item 2. Hydrology (Spoil Disposal):

A principal objective of the investigation of the San Francisco estuary is to establish the sources and rates of sediment supplied to the estuary, the modes of sediment transport, areas and rates of erosion and accumulation, and sediment exchange with the adjacent ocean. In our judgment, possible spoil dumping sites in the adjacent ocean and within the bay must be evaluated in the field, by a study that examines sediment transport in the entire estuary and nearby ocean repeatedly throughout all seasons. We would augment our continuing investigation to provide sufficient detail for the consideration of specific disposal sites.

Item 3. Hydrology (Aquifers):

A quality of water monitoring system will be designed utilizing existing wells in the vicinity of Sacramento and Redwood City in order to determine changes in chloride content of ground water in land areas adjacent to the proposed channel deepening.

Our requested budget is as follows:

Item	Duration of Study	Cost for first year	Cost for each successive year	Total
1. Biota Study	4 yrs.	$ 50,000	$ 20,000	$ 110,000
2. Hydrology (Spoil disposal)	4 yrs.	47,500	27,500	130,000
3. Hydrology (aquifers)	2 yrs.	30,000	30,000	60,000
				$ 300,000

I trust this meets with your approval. Additional information on the above program items can be furnished as desired.

Sincerely,

Robert E. Wallace

Robert E. Wallace
Project Director
San Francisco Bay Region Study

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

BUREAU OF MINES LIAISON
OFFICE - CALIFORNIA

450 GOLDEN GATE AVENUE
BOX 36012
SAN FRANCISCO, CALIFORNIA 94102

September 8, 1970

Colonel Charles R. Roberts
District Engineer, San Francisco District
Corps of Engineers
Department of the Army
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

In reply to your letter of August 27, 1970 (SPNED-RD), the coordinator for this office for the "Preliminary Plan of Study of San Francisco Bay Area In-Depth Study" will be:

Mr. Donald R. Irving
State Liaison Officer - California
Bureau of Mines
450 Golden Gate Avenue Box 36012
San Francisco, California 94102.

Sincerely yours,

Donald R. Irving

Donald R. Irving
State Liaison Officer

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

450 GOLDEN GATE AVENUE
BOX 36012
SAN FRANCISCO, CALIFORNIA 94102

BUREAU OF MINES LIAISON
OFFICE - CALIFORNIA

December 4, 1970

Colonel Charles R. Roberts
District Engineer
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

In response to your request for information on the anticipated extent of participation by other Federal agencies in the proposed San Francisco Bay Area In-Depth Study, the Bureau of Mines is competent to provide input for the following study elements:

(1) Commodity Flow
   (a) Projections of levels of commerce for petroleum, natural gas liquids, and other liquid bulk commodities imported from foreign countries and shipped in from domestic sources through San Francisco Bay.
   (b) Projections of levels of commerce for exports from San Francisco Bay of petroleum, petroleum products, and petrochemicals.
   (c) Projections of movements of other dry bulk mineral commodities into and out of San Francisco Bay.

It is estimated that it will take approximately 1 man year to collect and analyze the above data, at an estimated cost of $25,000.

(2) Environmental Studies
   (a) Conduct a survey of the mineral potential of the San Francisco Bay and adjacent shoreline. Known resources include salt, magnesium compounds, oyster shells, sand and gravel, and petroleum and natural gas.
   (b) Analyze and report on the effects of navigation facilities on mineral resources in the San Francisco Bay and adjacent shoreline.

It is estimated that it will take approximately 1 man year to collect and analyze the above data, at an estimated cost of $25,000. Full use will be made of related studies available in reports of the U. S. Geological Survey, California Division of Mines and Geology, and San

Francisco Bay Conservation and Development Commission.

In a reorganization of the Bureau of Mines announced April 1, 1970, and now becoming fully implemented, the project functions of the former San Francisco Office of Mineral Resources have been transferred primarily to Mineral Supply facilities in Washington, D. C., Spokane, Wash., and Denver, Colo. A Bureau of Mines Liaison Office, which I head, has been established in San Francisco. One of my principal functions is to conduct Bureau of Mines business that can best be done on the local level. Accordingly, preliminary negotiations concerning Bureau of Mines participation in the proposed In-Depth Study can be between your office and mine. Final approval of the Bureau's participation will rest with the Assistant Director--Mineral Supply, in Washington, D. C., as contracting officer. Also, the Assistant Director--Mineral Supply will be responsible for selection and assignment of personnel to the project when it is authorized.

If you or your staff have any further questions regarding our participation, please do not hesitate to call upon me.

Sincerely yours,

Donald R. Irving

Donald R. Irving
Bureau of Mines Liaison
Officer-California

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
PACIFIC SOUTHWEST REGIONAL OFFICE
BOX 36062
450 GOLDEN GATE AVENUE
SAN FRANCISCO, CALIFORNIA 94102

IN REPLY REFER TO:
D6427 CAL

Your Ref: SPNED-RD

September 29, 1970

District Engineer
Department of the Army
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Sir:

Your letter dated August 27, 1970, requested designation of a coordinator and certain information pertaining to the Bureau of Outdoor Recreation participation in the San Francisco Bay Area In-Depth Study. We understand that the information you require at this time is preliminary in nature and our official statement will be provided at a later date. Lieutenant Cobb was notified by telephone that Robert Van Etten, of my staff, will coordinate the Bureau of Outdoor Recreation activities.

The statements included within the preliminary plan of study, dated March 1969, provide an adequate base from which to develop the detailed study plan. The overall objective as outlined in that statement is oriented toward the development of water-borne commerce, with consideration of the effects of this development upon the natural features of the Bay Region. This study is estimated to cost approximately $4.5 million.

We are pleased to note the emphasis placed on environmental and ecological studies within the preliminary plan. The value of the Bay Area as an estuary providing recreation, fish and wildlife resources and open space has taken on additional significance within the last few years. The needs for urban-oriented and water-based recreation should be explored fully as major uses of San Francisco Bay and integrated into the final comprehensive plan for the development of the Bay complex.

In examining the study matrix, the Bureau of Outdoor Recreation is represented in various components of the environmental and ecological studies. This representation should provide an adequate base for our participation in the study. We request that the Bureau of Outdoor Recreation be included also in the section "Evaluation of Alternatives". Consideration of various alternatives certainly will be a most important segment of a comprehensive study requiring that all interests be fully represented.

The Bureau of Outdoor Recreation has several active studies in the Bay Area which should be considered. A Golden Gate National Recreation Area is being proposed by the Bureau of Outdoor Recreation to include important public open space in and around the Bay. Information will be available as required on this important recreation proposal for use in the Bay study.

In addition, the Bureau is in the process of completing a study of the wildlife, recreation and related resources of South San Francisco Bay to determine what actions are required to protect and utilize these resources. Particular emphasis is to be placed on the proposed South San Francisco Bay Wildlife Refuge. The proposed refuge would have major ecological, open space, recreational and educational values, which should be considered in your study of the Bay.

Land and Water Conservation Fund and Surplus Federal Property programs, administered by the Bureau, have provided opportunities to develop additional recreation sites in the Bay Area. Detailed information will be provided so these programs can be considered fully in the Bay study. The Bureau is active in other San Francisco Bay matters which will be included as the study progresses.

The Bureau of Outdoor Recreation participation in this comprehensive program will require an average of $25,000 annually over the study period. We understand these funds will be available for transfer from your agency. We are prepared to provide staff whose services would include general review and coordination functions for recreation matters, inputs of recreation data available through various Bureau programs and some preparation of draft material. We do not expect to assume responsibility for any major portions of the report or to take on major writing assignments at this level of participation. We concur in the designation of the Bureau of Sport Fisheries and Wildlife as overall coordinator for the environmental and ecological functions.

Thank you for the opportunity to provide this early input into the planning stages of this study. We look forward to participating in a meaningful manner.

Sincerely yours,

Frank E. Sylvester
Regional Director

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
PACIFIC SOUTHWEST REGIONAL OFFICE
BOX 36062
450 GOLDEN GATE AVENUE
SAN FRANCISCO, CALIFORNIA 94102

IN REPLY REFER TO:
D6427 CAL

Your Ref: SPNED-RD

November 17, 1970

District Engineer
U. S. Army Engineer District, San Francisco
100 McAllister Street
San Francisco, California 94102

Dear Sir:

Your letter dated August 27, 1970, requested a statement of proposed participation by this Bureau in the San Francisco Bay Area In-Depth Study. We supplied preliminary estimates by letter dated September 29, 1970. Since that time, we attended a meeting called to acquaint various agencies with the project and discussed your tentative program with Mr. Elmore and Lieutenant Flegal of your staff. They provided draft material regarding the plan of study and requested our review. This letter expands upon our letter of September 29 and comments on the draft material supplied by Mr. Elmore. We understand this information is considered preliminary and we will supply our final comments at a later date.

In spite of a number of studies on San Francisco Bay, there remain deficiencies in our understanding that weaken efforts to improve the social and physical environment. The Bay, the Delta and its hinterland are renowned resources and economic assets. Less glamorously, and by some measures, more importantly, the Bay Area is simply home to many Californians who, oblivious to larger designs, view their environment personally and possessively.

The study outline enumerates the issues needing investigation. It elaborates on the intricacies of economics, shipping, urban development, transportation, national defense and the environment. In view of the scale and complex interrelationships of these large problems, it is with some apprehension that we call attention to the essentially local and personal aspects of the San Francisco Bay Area. We feel strongly that local goals and desires must weigh heavily in plan formulation. Recreation and open space are two such local goals.

Basically, we are prepared to provide inputs relating to recreation and preservation needs. Both are integrally part of the social well-being and environmental objectives of the study and both have significant impacts on development goals and vice versa.

Recreation

Recreation aspects of the San Francisco Bay Area (which include Sacramento and Stockton for purposes of this study) will play an important part in the future of this metropolitan complex and should be a major segment of any comprehensive study. The tentative findings of the California Framework Study, Recreation Appendix, are that the bulk of all recreation needs not presently satisfied are urban oriented. The San Francisco Bay Subregion, which corresponds favorably with your study area, presently has inadequate water surface to meet predicted recreation needs for this resource. This deficit is expected to increase in the future.

These facts alone tend to set the stage for including a comprehensive look at recreation in your In-Depth Study of the Bay.

Many questions about the recreation needs of Bay Area residents come to mind. We are immediately impressed, for instance, with the contrasting resident and non-resident demands for recreation. We are also curious about the distinctive physical and social patterns of settlement, which lead us to suspect a need for contrasting resident demand for recreation. Measuring these aspects will call for some departure from traditional approaches and for sensitive attention to the implications of planned urban redevelopment and related population shifts. Consideration of these important factors will require a major effort in the "Needs and Problems" phase of the study. Our goal in this phase would be to identify those aspects of recreation relevant to local interests and desires that should be studied in detail in later phases of the study.

Concurrent with the demand analysis, we propose to compile an inventory of existing recreation resources. Available information should allow for this with a minimum of time and effort. Once a meaningful picture of demand has been formulated, the effectiveness of the present recreation resource in satisfying that demand can be measured. This entails careful examination of such factors as the suitability of the recreation resources, their level of development, location with respect to users, their appropriateness in terms of demand patterns and their present and potential capacity.

Analysis of demand and supply factors should yield a meaningful pattern of recreation needs relevant to both the study purposes and the people living in and visiting the study area. The form in which these needs

are expressed will depend on results of the detailed studies mentioned in the demand phase. Satisfaction of these needs revolves around development alternatives and study objectives. Relative impacts of the various development alternatives in terms of social well-being, environmental and economic conditions can then be assessed.

We believe it will be important to the overall study to develop a more or less single-purpose plan for meeting leisure time needs within the study area as a basis for selecting and evaluating the various alternatives. This plan would indicate the various recreation components present and proposed and rank them, when possible, as to their relative importance. This is a logical extension of the California Region Framework Studies in an area of demonstrated need. This aforementioned comprehensive study provides basic recreation demand and needs information by Subregion; however, for purposes of your proposed analysis, these estimates would require further definition especially in regard to types of recreation use and relationship to local desires. It would be imperative that these types of requirements be available early in the study so as to identify problem areas and serious needs. There is no question but that recreation needs concurrent with the Bay and any open lands would surface as extremely important considerations in any study of the Bay.

Preservation

Measurement of preservation values on a meaningful quantitative basis is probably impossible. Nevertheless, the special concern of Bay Area residents for the protection of open space, historic and archeological sites, unique natural areas and other scenic and esthetic aspects is well established. Assessing the need for and character of a preservation program very much depends on local aspirations and goals. As far as can now be judged, the introduction of State open space legislation, acceptance of the ABAG open space guidelines and the creation of BCDC foretell a highly sophisticated planning consciousness.

Identifying preservation values must first of all involve the inventory of what exists as available for protection. Use of information developed in previous studies and of the expertise of local planning agencies should enable a definitive expression of preservation goals. With these as a guide, a relevant preservation program can be formulated.

Of particular interest to us is the role of preservation in the "Evaluation of Objectives" phase of the study. Although quantitative evaluation of preservation may be difficult, we must be especially perceptive to the importance of these values in attempting trade offs and proposing alternatives. In our judgment, there are few objectives of greater consequence than those of preservation, (particularly open space) since future

development should in large part be predicated on open space requirements. We fully recognize the legal, institutional and political difficulties involved with such problems, but suggest that this challenge is implicit in plan formulation.

We propose to provide your staff with information on these aspects of the study to meet the needs outlined in the study proposal. Programs in Fiscal Year 1972 would include development of a detailed work outline, collection and summarization of available data on open space, recreation facilities and preservation aspects. Methodology for developing recreation demand and need information would be established. The Bureau of Outdoor Recreation would be represented at various meetings as required throughout the study.

In Fiscal Year 1973, we would be prepared to provide basic recreation inputs including numbers and costs as required. Demand, supply and needs data would be calculated and firmed up as a base for determining various recreation alternatives.

In Fiscal Year 1974, the recreation data for the study would be complete and draft material available. The Bureau of Outdoor Recreation staff would work with other study members in selection of alternatives which provide maximum potential benefits with the least adverse impact.

Fiscal Year 1975 would see final major recreation inputs into the study; various alternatives would be evaluated as to their effect upon open space, recreation and other social well-being and environmental accounts.

In Fiscal Year 1975, the Bureau of Outdoor Recreation involvement would be limited to modifications required due to changes in program, alternatives and attending various meetings, hearings, etc.

We estimate that the Bureau of Outdoor Recreation would require the following transfer funding on an annual basis to provide the above outlined assistance in this study.

FY 72	-	$ 52,000
FY 73	-	53,000
FY 74	-	45,000
FY 75	-	35,000
FY 76	-	15,000
TOTAL	-	$200,000

At this level of funding, the Bureau of Outdoor Recreation would not assume major writing or editorial responsibilities but would certainly be prepared to develop those phases of the study for which it has responsibility.

In regard to the draft material provided by Mr. Elmore, we find it to be generally very complete. On page 1 of Vessels and Port Facilities investigations should include an inventory of recreation boating, its future demand and needs on the Bay Area. Page 3(e) of the same section--recreation should be included. Page 4 should include an inventory of existing and proposed recreation boating facilities as these may be in direct conflict with commercial facilities. The section on Social Well-Being and the Environment should be given greater thought and definition as the study progresses, although we have no suggestions at this time.

We thank you for this opportunity to provide this preliminary material for consideration in your detailed plan of study for the proposed San Francisco Bay Area In-Depth Study.

Sincerely yours,

Frank E. Sylvester

Frank E. Sylvester
Regional Director

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
PACIFIC SOUTHWEST REGIONAL OFFICE
BOX 36062
450 GOLDEN GATE AVENUE
SAN FRANCISCO, CALIFORNIA 94102

IN REPLY REFER TO:
D6427 CAL

Your Ref: SPNED-RD

December 31, 1970

District Engineer
U.S. Army Engineer District,
San Francisco
100 McAllister Street
San Francisco, California 94102

Dear Sir:

This is in response to your August 27, 1970, request for a final field statement regarding the Bureau of Outdoor Recreation's participation in your proposed San Francisco Bay Area In-Depth Study. Preliminary information was supplied by letters dated September 29, 1970, and November 17, 1970. We appreciate this opportunity to comment on your proposed study.

The study outline enumerates the issues needing investigation. It elaborates on the intricacies of economics, shipping, urban development, transportation, national defense and the environment. In view of the scale and complex interrelationships of these large problems, it is with some apprehension that we call attention to the essentially local and personal aspects of the San Francisco Bay Area. We feel strongly that local goals and desires must weigh heavily in plan formulation. Recreation and open space are two such local goals.

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Concurrent with the demand analysis, we propose to compile an inventory of existing recreation resources. Available information should allow for this with a minimum of time and effort. Once a meaningful picture of demand has been formulated, the effectiveness of the present recreation resource in satisfying that demand can be measured. This entails careful examination of such factors as the suitability of the recreation resources, their level of development, location with respect to users, their appropriateness in terms of demand patterns and their present and potential capacity.

Analysis of demand and supply factors should yield a meaningful pattern of recreation needs relevant to both the study purposes and the people living in and visiting the study area. The form in which these needs are expressed will depend on results of the detailed studies mentioned in the demand phase. Satisfaction of these needs revolves around development alternatives and study objectives. Relative impacts of the various development alternatives in terms of social well-being, environmental and economic conditions can then be assessed.

We believe it will be important to the overall study to develop a more or less single-purpose plan for meeting leisure time needs within the study area as a basis for selecting and evaluating the various alternatives. This plan would indicate the various recreation components present

and proposed and rank them, when possible, as to their relative importance. This is a logical extension of the California Region Framework Studies in an area of demonstrated need. This aforementioned comprehensive study provides basic recreation demand and needs information by Subregion; however, for purposes of your proposed analysis, these estimates would require further definition especially in regard to types of recreation use and relationship to local desires. It would be imperative that these types of requirements be available early in the study so as to identify problem areas and serious needs. There is no question but that recreation needs concurrent with the Bay and any open lands would surface as extremely important considerations in any study of the Bay.

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Of particular interest to us is the role of preservation in the "Evaluation of Objectives" phase of the study. Although quantitative evaluation of preservation may be difficult, we must be especially perceptive to the importance of these values in attempting trade offs and proposing alternatives. In our judgment, there are few objectives of greater consequence than those of preservation, (particularly open space) since future development should in large part be predicated on open space requirements. We fully recognize the legal, institutional and political difficulties involved with such problems, but suggest that this challenge is implicit in plan formulation.

We propose to provide your staff with information on these aspects of the study to meet the needs outlined in the study proposal. Programs in Fiscal Year 1972 would include development of a detailed work outline, collection and summarization of available data on open space, recreation

facilities and preservation aspects. Methodology for developing recreation demand and need information would be established. The Bureau of Outdoor Recreation would be represented at various meetings as required throughout the study.

In Fiscal Year 1973, we would be prepared to provide basic recreation inputs including numbers and costs as required. Demand, supply and needs data would be calculated and firmed up as a base for determining various recreation alternatives.

In Fiscal Year 1974, the recreation data for the study would be complete and draft material available. The Bureau of Outdoor Recreation staff would work with other study members in selection of alternatives which provide maximum potential benefits with the least adverse impact.

Fiscal Year 1975 would see final major recreation inputs into the study; various alternatives would be evaluated as to their effect upon open space, recreation and other social well-being and environmental accounts.

In Fiscal Year 1975, the Bureau of Outdoor Recreation involvement would be limited to modifications required due to changes in program, alternatives and attending various meetings, hearings, etc.

We estimate that the Bureau of Outdoor Recreation would require the following transfer funding on an annual basis to provide the above outlined assistance in this study.

FY 72 --	$ 30,000
FY 73 --	35,000
FY 74 --	40,000
FY 75 --	30,000
FY 76 --	15,000
TOTAL	$150,000

At this level of funding, the Bureau of Outdoor Recreation would not assume major writing or editorial responsibilities but would certainly be prepared to develop those phases of the study for which it has responsibility.

We thank you for this opportunity to provide this material for consideration in your detailed plan of study for the proposed San Francisco Bay Area In-Depth Study.

Sincerely yours,

Frank E. Sylvester
Regional Director

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WESTERN REGION
450 GOLDEN GATE AVENUE, BOX 36063
SAN FRANCISCO, CALIFORNIA 94102

IN REPLY REFER TO:

L7423
(WR)CPF

September 3, 1970

Colonel Charles R. Roberts
San Francisco District, Corps
of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

In response to your letter of August 24 concerning your San Francisco Bay Area In-Depth Study, we have designated Mr. Edward F. Bullard (556-3891) as coordinator and Mr. Harry H. Sloat (556-3892) as an alternate.

We are in the process of preparing the additional information requested by September 21.

Sincerely yours,

Theodore R. Owings

Theodore R. Owings
Assistant Director, Western
Region

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WESTERN REGION
450 GOLDEN GATE AVENUE, BOX 36063
SAN FRANCISCO, CALIFORNIA 94102

IN REPLY REFER TO:

L7423
(WR)CPF

September 9, 1970

Colonel Charles R. Roberts
District Engineer
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Your letter of August 24 solicited additional information for consideration in your detailed plan of study.

Additional items of study to be included in the investigation would be an evaluation of the relative significance of the archeological and historical values in the San Francisco Bay Region. These evaluations should be included in the Environmental and Ecological Studies.

The following resume of the archeological situation is provided for your reference and convenience. This resume was previously included in our informational letter of July 8 concerning your May 1 notice of a public hearing on your San Francisco study.

> "Although far from complete, academic studies of Bay Area and Delta archeology are numerous and readily available. The region concerned is known to have been heavily populated by the ethnohistoric Costanoans, Miwok and Yokuts. These and earlier inhabitants of the Bay Area and Delta utilized various ecological zones, moving their encampments from shore to foothill. Over 425 shellmounds have been recorded near shorelines. Earthmounds, camps and permanent villages occur along waterways extending inland. Shellfish collecting, bay and ocean fishing, hunting, and acorn gathering are reflected in the remains of shellmounds as well as in those of inland sites. Some shell deposits show a time depth of over 4,000 years; others, the changes wrought by early European contact. During historic times, Indians from different tribal groups were moved from their

original territories and concentrated around the Missions. Historic records are sparse. Village sites went unrecorded and linquistic and tribal affiliations were lost. Archeological sites are the only sourcebooks left that can clarify the hazy picture of protohistoric and historic times.

"New harbor construction, enlargement of waterways or any activity effecting the Bay's shoreline could possibly endanger archeological remains. Shellmounds, in particular, are vulnerable as they are found on or near present shorelines and, also, partly or completely submerged. Ten such sites have been recorded, but studies are few. These sites contain data pertaining to the geological history and past ecology of the Bay Area; subsidence patterns, shoreline and sea level changes, and the resulting shifts in the biotic community. The ancient Indian is the only one who witnessed the sinking of the land, rising of the sea,and changes in food supply. His adaption, the Bay Area shellmound, is a valuable document and should be protected."

Likewise, the following resume of the historical situation was provided in our July 8 letter and repeated for your reference and convenience. We have, however, made reference to the cable car plaque which we failed to mention previously.

"Increased public interest in the Nation's historic heritage suggests that all sites of historic or potential historic value should be considered as an integral component of any in-depth study of the Bay Area. These include sites at the Golden Gate, such as Fort Barry, Fort Baker, Fort Mason, and Fort Point.

"Fort Point is the most prominent feature of the San Francisco Presidio, a National Historic Landmark. The San Francisco State Maritime Park, a little further along the Bay, includes the C. A. Thayer, a three-masted lumber schooner, another National Historic Landmark. The plaque designating the San Francisco Cable Car System in Aquatic Park near the cable car turntable. Although these are the only three national landmarks in the Bay Area which would be affected by activity along the Bay shoreline, numerous other sites exist of state and local significance.

Enclosed for your information is a copy of the Fort Point National Historic Site Proposal. The National Park Service's viewpoint on the area and its potential are summarized on pages 4 and 5."

Therefore, we suggest that we be included in the Federal agencies' study matrix relative to the Environmental and Ecological Study.

The status of existing and planned investigations and programs are as follows:

1. Establishment of a Fort Point National Historic Site has been approved by the Senate; however, the House of Representatives has not taken final action on this proposal.

2. The National Park Service administers the National Historic Preservation Act of 1966 for the Secretary of the Interior. This Act authorizes matching grants to States of up to 50 percent of the cost of acquiring or developing, for historic preservation purposes, districts, sites, buildings, structures, or objects that are significant in American history, architecture, archeology and culture. The law also authorizes matching grants to States for 50 percent of the cost of preparing comprehensive statewide historic preservation surveys and plans, the results of which will guide the making of grants for specific projects. A project may include historic preservation work by a State or local government or by private organizations and individuals. To be eligible for funds made available to the States, a project must be listed in the National Register of Historic Places in accordance with a comprehensive statewide historic preservation plan approved by the Secretary of the Interior, and in need of financial assistance. A more detailed explanation of this program is contained in the enclosed brochure "The National Register of Historic Places."

California's Liaison Officer for the National Historic Preservation Act is Mr. William Penn Mott, Jr., Director, California Department of Parks and Recreation. It is suggested that you contact Mr. Mott, because an evaluation of the historic values in the San Francisco Bay could probably be accomplished or may be underway in conjunction with the State's preparation of the prerequisite comprehensive statewide historic preservation surveys and plans.

To expedite the development of a register of historic places to be included in the prerequisite plan, Mr. Mott has designated individuals in each county responsible for the development of the local register.

The designated individuals in each of the nine Bay Area Counties are as follows:

Alameda - Mr. Jack G. Blue, County Clerk, Oakland
Contra Costa - Mr. W. T. Paasoh, County Clerk, Martinez
Marin - Mr. George H. Gnoss, County Clerk, San Rafael
Napa - Mr. C. S. Shippy, County Clerk, Napa
San Mateo - Mr. Marvin Church, County Clerk/Recorder, Redwood City
San Francisco - Mr. Ralph A. Mead, Secretary, San Francisco Landmarks Advisory Board, 100 Larkin Street, San Francisco
Santa Clara - Mr. George E. Fowles, County Clerk, San Jose
Solano - Solano Historical Society, c/o Mr. Otto Recknagel, 1022 Capitol Street, Vallejo, California
Sonoma - Mr. Eugene D. Williams, County Clerk, Santa Rosa

3. As you know, local Congressmen Burton and Mailliard have introduced legislation to establish a Golden Gate National Recreation Area. The National Park Service in cooperation with the Bureau of Outdoor Recreation and other local governmental entities are in the process of studying a proposed national recreation area in the Bay Area. These conceptual studies, however, have not progressed to the point of recommending specific areas or the appropriate administration of the various areas that may be included in national recreation areas. Even then, Congressional action will define the area and administration of a national recreation area; and at this time, we have no idea when this would occur.

These studies, as they progress, will provide information that may be helpful to you so do not hesitate to inquire. If Congress sees fit to designate Fort Point NHS and/or the Golden Gate NRA as part of the National Park System, we will become another Federal agency responsible for the management of Federal lands within the confines of San Francisco Bay and will have a vital interest in the plan and recommendations resulting from your in-depth study.

4. Master plan studies are to be initiated in the near future for Point Reyes National Seashore and Muir Woods National Monument. Hopefully, they will be completed in FY 1972. These studies may be of some value to you also. Any proposed future

transportation facilities seaward of the Golden Gate would, of course, be a concern to us in the protection of the natural and recreational values at Point Reyes NS. We trust that any such proposals will be brought to our attention in the progress of your study.

Time and cost estimates for an archeological survey would be three months and $5,000; however, this is only a very preliminary estimate until we know the geographic limitation of your in-depth study. This work would be done by our Western Service Center and it is doubtful that it could be programmed before FY 1973.

In reference to our comments concerning the National Historic Preservation Act, we have suggested that you initially approach Mr. William Penn Mott concerning an evaluation of historic values. We believe it more appropriate to arrange for this work with them because some duplication may be avoided.

The master plans and studies, of course, are normal activities of the National Park Service and you are encouraged to inquire into our progress and data that might be useful to you.

Hopefully, the foregoing provides the necessary information you need by September 21. We would, however, appreciate more information concerning what is expected of us in the final field level statement.

Sincerely yours,

Joseph C. Rumburg, Jr.
Director, Western Region

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WESTERN REGION
450 GOLDEN GATE AVENUE, BOX 36063
SAN FRANCISCO, CALIFORNIA 94102

IN REPLY REFER TO:

L7423
(WR)CPF

November 16, 1970

Your Reference:
SPNED-RD

Colonel Charles R. Roberts
District Engineer
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

We appreciate your continuing emphasis on the environmental and social aspects to be analyzed and evaluated in your San Francisco Bay Area In-Depth Study.

Based on the information presented at the October 5 meeting and subsequent discussions with Lt. Flegal and Mr. Elmore of your staff, we believe our input would relate to the "Social Well-Being Impact" and "Environmental" elements of your study. Specifically, we could assist or provide you data for items e; g (5); and i (2), (5), and (6) in your outline for "Social Well-Being Impact" studies and items A 1, 2, and 6; E; and Summary Studies in your outline for "Environmental" studies.

Our best estimate of funds necessary for this work is as follows:

FY 1972 - $3,000
FY 1973 - $3,000 + $5,000 for archeological survey
FY 1974 - $3,000
FY 1975 - $3,000
FY 1976 - $3,000

This work would be performed by our three-man staff in the Regional Office responsible for assistance to other Federal agencies. The assistance would be of a consultative or advisory nature and review of study reports as they are prepared.

The archeological survey would be under the direction of an archeologist in our Western Service Center. We can only estimate that FY 1973 would be the appropriate time for an archeological survey, because we realize that the locations of proposed and

alternate sites for transportation facilities must be determined before an archeological survey could be undertaken.

In our September 9 letter to you, we described the procedures relating to the National Historic Preservation Act of 1966. The State of California has started their comprehensive statewide historic preservation plan and it is anticipated that their plan will be completed late in 1971. This plan will delineate archeological and historic sites of local and state significance as well as some additional sites of national significance. We suggest, therefore, that you obtain a copy of this document when it is available.

We must caution you, however, that many sites of historic value, and particularly archeological sites, will remain unknown or unrecorded in the 1971 edition of the comprehensive statewide historic preservation plan. Thus, the above archeological survey is recommended.

As your study progresses and more precise definition of work to be accomplished can be determined, we hope that you will not hesitate to inquire if we can be of additional assistance.

My small staff providing assistance to other Federal agencies must operate on a first-come, first-served basis and they are presently committed through mid-FY 1972. Our Western Service Center, which has a wide variety of talent and expertise, operates on a programmed basis and a lead time of at least two years is generally required for them to incorporate studies for other agencies in their program.

Finally, we will be pleased to make available to your staff any data that may be helpful to you. Master plans and other studies for our park areas are continuing activities of our Western Service Center and will be expanded in the Bay Area now that President Nixon has established Fort Point National Historic Site as part of the National Park System. Conceptual studies continue in relation to the Golden Gate National Recreation Area. If a Golden Gate NRA should become a reality, large segments of the

Bay and Pacific waterfront would be available for a wide variety of recreational and cultural opportunities as well as the preservation of a myriad of natural and historic values.

Sincerely yours,

Daniel J. Tobin, Jr.
Acting Director, Western Region

UNITED STATES
DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

REGIONAL OFFICE, REGION 2
2800 COTTAGE WAY
SACRAMENTO, CALIFORNIA 95825

IN REPLY
REFER TO 2-703

SEP 4 1970

Col. Charles R. Roberts
Department of the Army
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, Ca. 94102

Dear Col. Roberts:

In response to your letter of August 24, 1970, the Coordinator for this office for the San Francisco Bay Area In-Depth Study will be Frank Stipak at this address, telephone (916) 481-6100 Ext. 2528.

Although we do not have a specific area of participation in your Preliminary Plan of Study, we would like to keep advised and are ready to participate in areas involving water resource development in the Bay Area and in the Central Valley Project, which includes the San Felipe Division to serve the Santa Clara Valley.

Sincerely,

H. E. Horton

H. E. Horton
Acting Regional Director

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
450 GOLDEN GATE AVE., P.O. BOX 36086, SAN FRANCISCO, CALIF. 94102

REGION VI

November 18, 1970

Metropolitan Planning & Development

IN REPLY REFER TO:
9MP

Col. Charles R. Roberts
District Engineer
San Francisco District
Corps of Engineers
Department of the Army
100 McAllister
San Francisco, Calif. 94102

Dear Col. Roberts: Subject: Bay Area In-Depth Study

The area of possible HUD interest selected by the Corps of Engineers for the subject study is shown in the Federal Agency Participation Matrix as item 5, Social Well-Being Impact. To this we have added as an interest area item 2, Transportation Systems; transportation is a major element in the type of general planning done under HUD funding, and at present we are involved directly in some statewide airport planning.

We will attempt to assemble this input through the cooperation of a technical advisory body comprised of state and regional planning agencies within our jurisdiction from whom we will request information conforming to the needs of the study. We are now seeking responses from those agencies regarding these ideas.

The task remaining between now and the time of our Final Plan Statement, December 4, will be to follow up our agency contacts and make a schedule of inputs which can be expected from the various sources. From this we can determine costs according to the degree of participation indicated.

I have designated as principal contact in the course of this work, Mrs. Charlotte Anderson, Urban Planner in the HUD Regional Office (556-5723).

Sincerely yours,

Samuel Weinstein

Samuel Weinstein
Assistant Regional Administrator

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
450 GOLDEN GATE AVE., P.O. BOX 36086, SAN FRANCISCO, CALIF. 94102

REGION VI

Office of the Regional Administrator

DEC 22 1970

IN REPLY REFER TO:
9MP

Col. Charles R. Roberts
District Engineer
Department of the Army
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, Calif. 94102

Dear Col. Roberts:

Subject: San Francisco Bay Area In-Depth Study HUD Input

In response to our request to several agencies concerned with the subject study, enclosed please find tentative work program estimates from ABAG, a partial bibliography of research data produced by the Sacramento Regional Area Planning Commission, and the California Office of Planning and Research. The latter two agencies did not submit cost estimates; we have interpreted this to mean that the extent of their input will be to make available whatever data will be helpful and preclude duplication of work by the In-Depth Study.

ABAG indicates an interest in coordinating regional planning at a total cost of $750,000 to $1,000,000. This shall be prorated among the work items described in the enclosure, Preliminary Planning Program. Under that program, ABAG could quite logically incorporate the bibliographies submitted by those agencies, and the complete bibliography could be utilized by other participating agencies. The Office of Planning and Research has forwarded our inquiry to the Council on Intergovernmental Relations for additions to this data supply.

For the present HUD will catalog and maintain this bibliography. At such time as the ABAG input proposal is accepted as part of the study, the bibliography will be turned over to ABAG. This resource is for use by all participating agencies to acquaint themselves

with the scope of work which has been done, and to prevent duplication.

Sincerely yours,

Andrew J. Bellotti

Regional Administrator

Enclosure

#1

ASSOCIATION OF BAY AREA GOVERNMENTS

DRAFT REPORT

APPROACH AND PLANNING CONSIDERATIONS

The broad, multi-functional intergovernmental and distinctly regional planning and policy implications of the In-Depth Study appropriately requires the active participation of the comprehensive regional planning agency for the nine-county Bay Area. The primary impact of navigational development in the San Francisco Bay System will focus upon the urban region, and with multiple and areawide considerations involved, the regional level should be strongly represented in the study.

To be successful the In-Depth Study will require a highly sophisticated regional planning program which will not be likely if the planning effort is to be fragmented among so many federal agencies. In that the planning activity and potential impact is so distinctly regional, independent sponsorship, conduct and direction is likely to leave little broadly available and usable data or few widely accepted or coordinated plans if the regional agencies are not strongly involved. (See page 1 of ABAG'S 5 year work program Toward a Unified Planning Program for the San Francisco Bay Area.)

Conceptual Approach

The conceptual framework which would provide the basis for ABAG'S approach and its planning program for assistance to HUD must be clearly stated from the start. That framework would be inclusive and interrelated for the comprehensive investigations contemplated in the In-Depth Study. Navigational development, and associated economic growth, together with their physical, financial, environmental and social implications would need to be conceived as falling under three broad groups of programs and program areas:

1. Conservation and development systems. Those program areas which are concerned with physical conservation and development, e.g. harbor facilities, transportation systems, land use, etc.

2. Human systems. Those program areas which are associated more or less directly with people, e.g. population distribution, employment, recreation, etc.

3. Operational Support System. Those program areas which affect and are associated with the broad operations of government, e.g. finance, regulation, etc.

The close ties between these systems, e.g. changes in one causing positive or negative changes in the other(s) requires consideration of the whole

of these elements throughout the conduct of the planning effort, even though a particularly team member is concerned with one part.

The In-Depth Study will concern itself with the complex, densely populated, closely interrelated social, economic, environmental and ecological aspects of the San Francisco urban region. HUD's responsibilities and interests are equally pervasive. It must be assumed that HUD's area of interest can be defined broadly to include the above conceptual framework. In this case HUD's area of interest must extend into each study area that has a potential impact on the urban scene, weighing each study item against the other and relating them to develop the comprehensive approach that is needed. If this assumption is correct then ABAG's approach would be complementary to HUD's.

Other Planning Considerations

The In-Depth Study is more than just a "study". It will result in the preparation of alternative plans leading to the selection of a regional navigational transportation plan element, including supportive facilities such as harbors, etc. Such planning will also include study of and planning for other systems that are closely tied to navigation.

The planning effort will include the formulation of alternative regional goals, objectives and policy guidelines for specific time frames to the year 2040 for navigation development. Each alternative plan for navigational development will need to demonstrate its compatibility with and contribution to existing regional plans, and their respective goals, objectives, and policies. Where regional plans do not exist or do not extend to the year 2040, the In-Depth Study will need to develop assumptions concerning the scope and content of such goals, objectives and policies in such areas as land use, transportation, environmental quality, population distribution, employment distribution, etc. Because the In-Depth study extends into other areas in order to determine the relationships between navigation development and other system, it will also be necessary in many cases for planning to be done for those systems during the In-Depth Study. The issue involved here is how much planning will be done for other systems and by whom.

PRELIMINARY ABAG-HUD PLANNING PROGRAM

FOR ASPECTS OF SOCIAL WELL-BEING STUDY ELEMENT

COE No.	Regional Planning Tasks	Study Participants	Cost	Current Status and Work Needed
P4-A	1. Develop Forecasts a. Analyze 1970 Census data b. Update economic, demographic and land use data to 1970 c. Develop most feasible economic, demographic and land use forecasts utilizing ABAG-RTPC urban growth models, based on regional policies d. Analyze and project principal items of production - consumption.	ABAG, RTPC, Consultants		Extensive data files exist. Reevaluation of economic and demographic studies conducted in the region needed in regard to methodology and accuracy as tested by the 1970 Census. 1970 land use inventory needed. Urban growth simulation models need extending to 2040
P4-B	2. Commodity Flows Related to S.F. Port System a. Analyze prospective change in imports-exports including selective sector analyses and with special reference to the development of the Pacific Basin	ABAG, Consultants		Partial data exists
P4-E	3. New and Expanded Industries a. Identify new and expanded industries which will be dependent upon improved navigation facilities	ABAG, Consultant		Data availability uncertain
P4-F	4. Projected Raw Material Requirements	ABAG, Consultant		Partial data exists
P5-H	5. Public Revenues Related to Associated Economic Growth	ABAG, Consultant		Data availability uncertain
P6-B	6. Test Alternatives Port Development Implications a. Population b. Employment c. Land use	ABAG, RTPC, Consultants		Develop alternative par a meters and iterate models

COE No.	Regional Planning Tasks	Study Participants	Cost	Current Status and Work Needed
P6-G	7. Develop Socio-Economic Disbenefits Associated with Alternative Port Development Plans.	ABAG, Consultant		Data availability uncertain
P7-G2	8. Adverse Population and Employment Impacts	ABAG, cities, counties, consultant		Evaluate urban growth model runs against regional policy matrix
	9. Develop Welfare Factors			
P7H-2	a. Evaluate port development alternatives in terms of travel times	ABAG, RTPC, Consultant		Utilize transportation model runs if possible
P7H-5	b. Displacement of urban development	ABAG, cities counties		Data availability uncertain
	10. Alternative Port Development and Environmental Quality			
P8I-1	a. Evaluate impact on urban uses in zone of influence	ABAG, cities Consultant		Data availability uncertain
P8I-2	b. Develop concept plans for parks and open space	ABAG, BCDC, East Bay Regional Park Dist., cities, counties.		Extensive data files exist
P9J-2	11. Develop Urban Design Guidelines	ABAG, cities, counties, Consultant		
P9J-3	12. Development Regulation Constraints	ABAG, cities, counties		Extensive data files exist
P9J-4	13. Governmental Financial Input Requirements in Port Development	ABAG, Consultants		Partial data exists
P9J-5	14. Coordinative Aspects of Port Development	ABAG, cities, counties, Consultant		Partial data exists

COE No.	Regional Planning Tasks	Study Participants	Cost	Current Status and Work Needed
P9J-6	15. Policy Constraints	ABAG, Consultant		Partial data exists

#3

Association of Bay Area Governments
Hotel Claremont
Berkeley, California 94705
415 841-9730

PUBLICATIONS

Distribution Policy: In order to disseminate the findings and results of Association programs, publications will be given the widest possible distribution in the Bay Area consistent with their general interest and budget limitations as follows:

M -- General availability (multiple copies)
S -- General availability (single copies)
L -- Limited availability to libraries, agencies, firms and organizations
T -- Technical. For the use of professionals in the field.
X -- Out of Print. Available in the ABAG library.

Distribution outside the Bay Area TO THE FOLLOWING ONLY: State and Federal Government agencies and Repository Libraries, Agencies in counties that border the Bay Area, College and University libraries, and other Councils of Governments.

Distribution Category	Publication
L	Refuse Disposal Needs Study, July 1965
X	Refuse Disposal Needs Study. Supplemental Report, July 1965
T	Regional Information System. Preliminary Design Concept, 1966.
X	Regional Home Rule and Government of the Bay Area, September 1966.
S	Preliminary Regional Plan for the San Francisco Bay Region, November 1966.
X	Inventory of Parks and Open Space of San Francisco Bay Region, 1967.
X	Population and Labor Force Projections, (Two Volumes and Report) 1967.
X	Bay Shoreline, 1967.
L	Regional Government Agencies and Programs in the San Francisco Bay Area, An Inventory and Analysis, June 1967.
T	Regional Geology, August 1968.

X Four-County Bay Area Community Shelter Plan: Phase I Progress Report, October 1968.

X Guide to "RAP" Library Classification System, November 1968.

X Community Shelter Plan (Four County Bay Area) Phase I, January 1969

X A Program Design for Criminal Justice Planning in the San Francisco Bay Region, March 1969

X Four-County Bay Area Community Shelter Plan; Phase II, June 1969.

L Agricultural Resources Study, August 1969.

L Regional Open Space Element, October 1969.

S Regional Housing Study, October 1969.

T Criminal Justice Information and Communications Systems, December 1969.

S Grant Review Policies and Procedures, January 1970

S 1969 Annual Reports, January 1970.

T Work Program for a Bay Region Planning Information Support Center, February, 1970

M What Is ABAG?, April 1970 (One page fact sheet).

X Four County Bay Area CSP Allocation Plan (Narrative Report). April 1970.

T Four County Bay Area CSP Map Atlas, April 1970

L Four County Bay Area CSP Statistical Abstract, May 1970.

S Ocean Coastline Study, June 1970.

S Bylaws of the Association, as amended July 30, 1970

L Response Analysis Study, July 1970.

S Phase I - Regional Water, Sewerage & Drainage Plan, July 1970

S Summary Report, Phase I, Regional Airport System Study, August 1970.

S Regional Plan 1970-1990, August 1970.

S 1970-71 Budget of the Association.

#4

BATSC PUBLICATIONS AVAILABLE FOR RELEASE

Study Design, January 31, 1966.

Procedural Manual for Speed-Volume Runs, BTR 206, September, 1966.

Assignment of Traffic to Critical Links of a Network, BTM 216, November, 1966.

Development and Analysis of Complex Data Files in a Regional Transportation Study, BP 201/00/01, June, 1967. Presented at the Council of Social Science Data Archives Annual Conference, Los Angeles.

An Investigation of Retail Land Use Forecasting Models, BTR 203, December, 1965.

Home Interview Manual, November, 1965 (out of print).

Home Interview Coding Manual, BTR 208, August, 1967.

Land Use Inventory Field Listing Manual, BTR 214, March, 1967.

Land Use Inventory Precoding Manual, BTR 207, March, 1967.

Land Use Inventory Classification Manual, BTR 209, March, 1967.

Land Use Inventory Graphic Digitizer Manual, BTR 210, July, 1967.

Land Use Inventory Procedural Manual, BTR 215, March, 1967.

A Data Base for Regional Planning, June, 1969.

EMPRO: BATSC Employment Projections, 1965-1990, BTR 218, April, 1968.

External Cordon and Screen Line Surveys Manual, BTR 211, June, 1965.

Employment Inventory Manual, BTR 212, November, 1967.

SPILLOVER - A Model for Projecting Regional Employment, BTR 216, January, 1967.

BATSC Locational Model System with Planning Constraints, BTM 222, December, 1968.

Truck - Taxi Survey Manual, BTR 217, July, 1968

Annual Average Daily Traffic, BTR 221, October, 1968.

BATSC "Controlled Trends" Zonal Forecasts 1965 - 1980 - 1990, BTR 226, May, 1969.

Bay Area Transportation Report, May, 1969.

Bay Area Transportation Report - Supplement I, Organization and Planning - Innovations and Novel Systems, May, 1969.

Bay Area Transportation Report - Supplement II, Urban Transportation Finance, June, 1969.

BATSC Transportation Models - Trip Generation (model summary), BTM 227, June, 1969.

BATSC Transportation Models - Trip Distribution (model summary), BTM 228, June 1969.

BATSC Transportation Models - Modal Split (model summary), BTM 229, June, 1969.

Projective Land Use Model, BTR 219, September, 1968.

#5

ASSOCIATION OF BAY AREA GOVERNMENTS

Selected Data References for Certain Parts of Social Well Being Study

1. Series of reports prepared for commodity flow and world trade for the Panama Canal Co. 1955-1968.

2. Evaluation of Bay Area Economic Studies.

3. Oakland 701 Study.

4. West Bay Transit Study.

5. Recent Economic Study of San Francisco Area of dominant influence.

6. Projections of U.S. Dry Bulk Imports and Exports - Marad.

7. Projections of Containerization - U.S. Imports and Exports.

8. Numerous West Coast Port Studies related to financing of Ports.

NARRATIVE SUMMARY OF CURRENT ABAG PROGRAMS

ABAG's broad range of activities includes comprehensive, functional, and coordinative planning; research and analysis; and implementation.

Association of Bay Area Governments
Hotel Claremont
Berkeley, California 94705

415 841-9730

November 1970

CRIMINAL JUSTICE PLANNING has as its objective the development of continuing long-range planning and the improvement of the criminal justice system through action programs. Four categories of issues are dealt with: intergovernmental, inter-agency, multi-jurisdictional, and technological and administrative.

An Ongoing Support Program consisting of 21 projects and activities, constitutes a "core" of activities which are fundamental and necessary to the administration of the criminal justice planning and grant review program. In addition, the projects and programs below describe both the initial plan and the process for a comprehensive approach to criminal justice improvement.

Regional Training and Education of Criminal Justice Personnel - An analysis of the needs and potential resources for developing a comprehensive, interdisciplinary approach to training and education of all criminal justice personnel.

Improving Judicial Procedures and Court Administration - An analysis of court organization and process for developing alternatives to deal with procedural problems and more efficient administration of court functions.

Reducing Narcotics and Drug Abuse - A multiphased effort to develop a regionally coordinated program in the areas of education, community-based treatment centers, more effective use of present resources, and evaluation of fundable city and county agency applications.

Model Cities - Providing Model Cities programs with the information and expertise necessary to develop the law and justice components of their operations and to encourage their submission of grant applications.

Development of Local Criminal Justice Coordinating Agencies - *Contacts have been made and assistance has been given to several counties.* This involves the development of a region-wide systems approach with special emphasis on county geographic units. It would result in coordinated comprehensive planning with respect to criminal justice activities, particularly through the vehicle of Safe Streets grants.

Improving Youth Services Procedures - *Data has been gathered and analyzed on youth serving agencies and the processing of juveniles through the system, and a flow chart of existing decision points has been developed.* A model set of procedures for agency decision-making will be proposed.

Reducing Youthful Drug Violations - Involves the development of model prevention and treatment programs for potential and actual drug offenders.

Reducing Crime among Serious Delinquent Offenders - Development of a model adjudication and treatment program for processing and treating serious delinquent offenders.

Reducing Delinquency among Unsophisticated Minors - *Data has been gathered and analyzed on the nature and incidence of delinquency.* A survey of present school and police programs, management information systems and inter-agency records accessibility will be conducted, resulting in a model program for uniform case analysis and referral procedures and a coordinated treatment program.

Training Juvenile Justice System Personnel - Development of a regional, interdisciplinary, inter-agency training format for personnel involved in specialized functions within the juvenile justice system.

A Cooperative Approach to Police Services - *Certain data has been gathered and analyzed on existing operations of this region's crime labs, police training academies, and detention facilities.* This program will establish a framework of workable alternatives to duplication and lack of coordination among the many police and supportive law enforcement services in the Bay Area. It will determine those types of services which may be susceptible to cooperative approaches at regional and sub-regional levels, and it will result in a plan of implementation. Among the areas to be studied in addition to those mentioned above are personnel recruitment and selection, and purchasing.

Reducing Organized Crime - A study to develop guidelines for local law enforcement agencies, in cooperation with the State Attorney General's Organized Crime Unit, to use in organizing teams of officers to work in the field of organized crime.

Improving Police Mutual Aid Planning - *Data has been gathered and analyzed on mutual aid practices and laws.* An in-depth survey on the needs of the region and the development of a plan to meet these needs will be prepared.

Improving Police-Community Relations - A survey of area law enforcement agencies community relations programs has been conducted. In-depth studies of specific programs and of their community acceptance, are underway. Alternative model programs for communities with particular needs will be developed.

Allocation of Law Enforcement Resources - Information will be gathered to determine resources allocated for law enforcement and a cost analysis of selected activities will be conducted. A plan covering suggested reallocation of resources to avoid duplication and to more effectively distribute these, both generally and in specific areas, will be developed.

Reducing Crime among Young Adult Offenders - Involves an inventory of needs and problems of young adult offenders, the nature of police contact programs in schools, group homes, information systems management and inter-agency records accessibility. A plan for specialized model adjudication and treatment programs for processing young adults will be formulated.

Reducing Alcoholism and Improving Alcoholic Treatment Facilities - A plan to reduce the number of persons cycled through the criminal justice system who would be better placed in alcoholic treatment facilities will be developed. These facilities will also be studied with the intent of developing more effective community-based treatment centers.

Developing a Regional Approach to Correctional Administration - A study of this region's jail operations probation services, and related social programs, leading to development of a plan for reorganization and implementation of improvements, and the development of community-based treatment programs and facilities.

Expanded Use of Pre-trial Release - *An analysis of relevant data and a region-wide survey of OR and citation programs has been conducted.* The data is being

tabulated currently. A model program to increase the use of pre-trial release alternatives and the means of implementation will be developed in conjunction with an analysis of jail population profiles which is now in progress.

Improving Pre-Trial Decision-making - An analysis and evaluation of charging practices by prosecutors, negotiated pleas of guilty, and pre-trial discovery in criminal cases with the goals of improving decision-making, insuring fairness to the defendant, and reduction of delay is being conducted.

Information and Communications Systems - *A baseline plan for the region and a survey of regional needs is complete.* (Criminal Justice Information and Communications Systems Report). Future work will include, among other projects, determining the feasibility of a juvenile index.

REGIONAL TRANSPORTATION PLANNING

ABAG Regional Plan will be detailed in order to test highway and transit policies in relation to the Plan. The goals and objectives of the Plan will be represented in quantities of population, employment, and land use for about 300 sub-areas of the Region. The transportation element in the Regional Plan will be reviewed in cooperation with ABAG's overall Plan review process. Tools to test the transportation implications of the Plan will be provided by the Controlled Trends Project, which includes work initiated under BATSC.

Transit Development Program includes three studies: (1) regionwide appraisal of transit needs over a long-term period, (2) short-range capital improvement program and priorities schedule, and (3) plan for the coordinated operation of the total transit system. Additional studies will include transit technology, finance, operations and organization.

Sub-Regional Studies of transportation are underway in Sonoma County, Santa Clara/San Mateo Counties, and Western Alameda and Contra Costa Counties. Regional agency also supports and cooperates with countywide transport studies in Contra Costa and Marin Counties.

Project Reviews of transportation projects are made in connection with ABAG's review function as the Metropolitan Clearinghouse.

Technical Development continues for a finer zonal analysis system. This involves network coding and interim trip generation work for a zonal system of about 1200 zones, compared with the present 300.

Continuing Data Operations include maintaining and updating the data base generated by BATSC, providing frequent data services to users in the Bay Area and other parts of the country, and cooperating with preparations for applying 1970 Census data to transport planning.

REGIONAL AIRPORT SYSTEMS STUDY is a two-year project to provide a plan for the development of Bay Area aviation facilities that will consider the relationships between aircraft, airport facilities and the surrounding community, and make recommendations for balancing aviation demand and need with other regional concerns and resources by selecting priorities and identifying actions.

Phase 1, a data collection phase, included forecasts of demand, inventory of facilities, airport and airspace capacity and airport access. Four technical reports and Regional Airport Systems Study Phase 1 Summary have been published. Phase II will relate aviation activity to environmental quality in terms of (1) air pollution, (2) noise and human response, and (3) land use patterns. Aviation goals, policies, and objectives will be developed and related to the regional goals of ABAG. Within this framework, criteria and priorities will be generated for considering alternatives. The "Best Alternatives" will be identified. They will balance aviation demand with regional goals including the liveability of the Bay Area. This will result in a regional aviation plan and a procedure for a continuing aviation planning process.

COMMUNITY SHELTER PLANNING *has developed in two and one-half years, a four-county (Alameda, Contra Costa, San Francisco, San Mateo) plan for the protection of citizens from fallout in case of nuclear emergency. The plan "matches" people to the best available shelter resources. These include structures of all types (skyscrapers, BARTD, tunnels, schools or shopping centers). Numerous technical reports, a map atlas, and valuable data that is useable in other types of regional and local planning studies has been produced.*

The current phase of CSP is implementing a Public Information Program which will tell the public "what to do" and "where to go" in case of a nuclear emergency and other types of natural or man-made disasters. A future area that ABAG may be involved in is emergency planning process for preparedness for disasters. This might eventually result in an operations plan for coordination of public and private disaster resources.

SPECIAL PROJECTS:

MANPOWER DEVELOPMENT PROGRAMS include a survey of the 1975 manpower needs of local government including technical, administrative and professional; and a pilot project to provide technical assistance to cities and counties in establishing manpower development programs aimed at low income and low skill workers. Several jurisdictions are participating in this experimental program.

CATV REPORT will explore the possibilities of standardization to integrate various CATV franchised systems to meet future regional communication needs.

ENVIRONMENTAL QUALITY programs will involve new or expanded programs in the fields of solid waste, water quality, air quality and open space and parks. This program and the advisory committees are still in the formative stages.

One of ABAG's first published studies was the 1965 Refuse Disposal Needs Study which inventoried existing sites and capacity and detailed the seriousness of the problem.

REGIONAL PLANNING PROGRAM

The following is a listing of planning activities recently completed or currently underway as part of the Regional Planning Program.

Regional Plan 1970-1990 - General policy concerned with guiding growth and development and maintaining environmental quality was approved in July. The Plan will undergo a formal review process by member cities and counties during the next year.

Water, Sewer and Drainage Plan - *Reconnaissance of the existing situation, goals and the program design for this functional element is included in the recently published Phase 1 report.* Phase II, to be completed early in 1971, involves the preparation of an officially coordinated long-range plan and a short-range (5 to 10 years) plan which identifies short-term needs for water, sewerage and drainage and proposes facilities required to meet these needs. Phase III will provide for review revisions, and the further development of the Water, Sewer and Drainage Plan.

Open Space Plan - *Open Space data has been updated and refined in the Open Space Element published in 1969.* A functional plan will be prepared proposing open space policy guidelines, and systems for implementing the plan.

Housing - *Regional Housing Study published in 1969 was ABAG's first major study of the subject.* A report on the content and impact of local development regulations on housing costs will be published shortly. A housing element for the Regional Plan will develop regional housing goals, policies and objectives.

New and Extended Town Developments study will consider optimum size, demographic, social and economic aspects and private and public approaches for the development of planned new towns or substantially expanded small towns within the Bay Area.

Ocean Coastline - *Ocean Coastline Study published in 1970, identified regional coastline problems and issues.* A special committee of elected officials from coastal counties is being appointed to guide the preparation of a regional Ocean Coastline Plan.

Regional Information System - *The computerized information system on populations, transportation and land use generated by BATSC has been maintained by ABAG (RTPC) and a program design for regional planning information support system is complete.* DIME (Dual Independent Map Encoding), a geographic base file system will be developed by ABAG this year as part of the further development of a regional information center.

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Economic Resources Study includes an examination of the region's industrial strength, economic growth forecasts, regional manpower inventory, regional information systems data inputs, and sets up the basis for a regional economic analysis system.

Environmental Data - USGS and HUD are involved in a $3.2 million study of the region's land resources and environmental problems. ABAG is assisting in the study by providing local and regional planning inputs, liaison, and coordination.

Citizen Participation - Alternative approaches for involvement of citizens in the regional planning process is currently under study.

Five Year Planning Program Design - *sets forth a program and a schedule for comprehensive regional planning activities for a five year period.* The proposed program design which stresses the need for coordinated regional planning is currently being considered by several Association committees. The five year program, when adopted, will set priorities and guide the direction of future regional planning activities.

Federal Project Review - *As Metropolitan Clearinghouse for the Bay Area, ABAG has reviewed, since 1962, federally assisted projects totaling $1.1 billion (excluding highway funds).* Grant applications for 45 different programs and federal development projects are reviewed in terms of their regional impact. Project programming, priority policies and a Regional Capital Improvements Program are being developed.

APPENDIX C

REPORTS AVAILABLE FROM THE COMMISSION

General Reports

Survey of Key Development Element, February, 1968.

Preliminary Regional Plan (Tabloid Newspaper), August, 1969.

Revised Preliminary Regional Plan Alternatives (Tabloid Newspaper), April, 1970.

Regional General Plan-Physical Development Element Draft "Now to 1990", August, 1970.

Annual Report of Progress, 1968-69, September, 1969.

"The Job Ahead" Overall Program Design, January, 1969.

Technical Reports

A Population, Employment, and Economica Base Analysis, Sutter and Yuba Counties, June, 1970.

Regional and County Projections - Median Household Income, June, 1970.

Sacramento Regional Information System, July, 1970.

Proposals for a Management Training Program for Sponsors of Housing Developments, July, 1970.

Summary of Federally Aided Programs for Low and Moderate Income Housing, February, 1970.

An Analysis of Potential Housing Sponsors in the Sacramento Regional Area, June, 1970.

General Characteristics of Candidate Pilot Housing Developments, August, 1970.

Description and Analysis of the Process of Packaging A Housing Development, March, 1970.

Functions and Alternative Methods of Organization for a Regional Housing Center, June, 1970.

General Policy Alternatives for a Regional Housing Center Working Within the Counties of the Sacramento Regional Area, April, 1970.

Technical Reports (Cont'd)

The Air Pollution Threat, Technical Papers, October, 1969.

Preliminary Water and Waste Management Plan, November, 1969.

Preliminary Water and Waste Management Plan, Sutter and Yuba County, June, 1970.

Directions of Urban Growth, June, 1969.

Goals for Parks, Recreation, and Open Space, March, 1970.

Development of Schematic Transit Plans, August, 1969.

An Overview of Governmental Alternatives for the Organization of a Regional Transit System, March, 1970.

Alternative Revenue Sources for a Regional Transit System, March, 1970.

Inventory of Capital Outlays 1967-68, July, 1970.

Initial Housing Element (Regional), January, 1970.

Prospectus for a Gold Rush Parkway Study, September, 1970.

The Quality of the Air in the Sacramento Regional Area, December, 1968.

Inventory of Parks and Outdoor Recreation Facilities, June, 1968.

Land Use Inventory, December, 1968.

Distribution of Employment, October, 1968.

Inventory of Existing Law Enforcement Systems, January, 1970.

Interim Procedural Guide-Regional Clearinghouse, October, 1969.

State of California

GOVERNOR'S OFFICE

SACRAMENTO 95814

Suite 222, 1400 Tenth Street

RONALD REAGAN
GOVERNOR

December 11, 1970

RECEIVED
SAN FRANCISCO

Mr. Samuel Weinstein
Assistant Regional Administrator
Metropolitan Planning and Development
Department of Housing and Urban Development
450 Golden Gate Avenue, Box 36003
San Francisco, CA 94102

Dear Mr. Weinstein:

In reply to your letter of November 18, 1970 (your file 9MP) regarding the Bay Area In-Depth Study we are enclosing brief narrative descriptions for three projects being administered by this Office which might provide input to this project.

a) Comprehensive Ocean Area Plan, Calif. P-337

b) Master Plan of Aviation, Calif. P-334

c) Market Aggregation and Housing Analysis Study, Calif. P-375

d) Urban Transportation Planning Research and Demonstration Program, Calif. PD-7

All of these projects are in progress, but most of the basic data is not yet in a published form. However, certain materials are available for use by the Corps of Engineers. We will be happy to arrange for review of these materials if desired.

In addition to these Statewide projects, there may be local and regional programs of interest. Since the Council on Intergovernmental Relations is the State agency with direct local regional contact we have forwarded a copy of your request to them so they may reply directly to you regarding any projects with which they might be associated.

We have also forwarded a copy of your request to the Office of Intergovernmental Management which has the A-95 clearinghouse responsibility for the State, rather than this Office as suggested in your letter. I am sure that you may be hearing directly from them shortly.

Mr. Samuel Weinstein December 11, 1970

I hope this material is helpful. Let us know if we may be of further assistance.

Sincerely,

SAMUEL J. CULLERS
Acting Director
Office of Planning and Research

SJC:eep

Enclosures

Description of Planning Work

I. Phase II

A. Establish Inventory and Primary Data File.

1. Obtain general inventory data (current ownership, uses, resources, area characteristics and legal restraints.

2. Obtain the data in manual ("hard copy") form (maps, photographs, text, etc.)

3. Catalog, file, announce availability of data obtained, as Data Center function.

4. Establish systems for continuing to receive similar data as it is newly produced by each source agency, to update Data Center files.

B. Prepare State Agency Contributions. Obtain "special interest" topic sections from Planning Team members, and other State representatives assigned to produce them, as "lead agencies".

1. Obtain feedback and agreement from assigned authors from lead agencies as to content and format of their contribution, and their commitment to a schedule for producing it.

2. Planning Staff work regularly with authors, guiding and encouraging their work, and helping solve problems, acting as project supervisors and analyzing the contribution from a COAP standpoint.

C. Obtain Private Sector Contributions.

1. Contact major industries and landowners of coastal zone lands and obtain, review, and analyze as part of input to the COAP.

D. Obtain Regional and Local Plans.

1. Contact all regional, etc. governments to list planning organizations and plan documents available.

2. Obtain those plans and data, with notes from discussion with planning staffs amplifying written materials where possible and analyzing them as part of the input to the COAP.

3. Catalog, file, announce availability, as Data Center function.

4. Establish system to receive similar data from each active source in future, to update Data Center files.

E. Obtain Federal Contributions.

1. Obtain those plans and data, with notes from discussion with planning staffs amplifying written materials where possible and analyzing them as part of the input to the COAP.

2. Catalog, file, announce availability, as Data Center function.

3. Establish system to receive similar data from each active source in future, to update Data Center files.

F. Obtain Specific Contractor Contributions. (all State funds)

1. Prepare specifications for product wanted.

2. Obtain proposals; evaluate and select contractor.

3. Define time, money, and manpower constraints; format and contents.

4. Maintain careful control over progress of work, in close contact with contractor.

5. Evaluate finished product, suggest required revisions, approve final product for payment.

G. Analyze Special Interest Data for Conflicts.

1. Identify data, policy and use conflicts--gaps and overlaps--between different manuscript contributions to COAP.

2. Check existing data, obtain any additional data required to reconcile conflicts identified above.

3. Feed conflicts back to contributing authors, and get them to resolve all they can.

H. Reconcile Conflicts.

1. Develop more explicit expression of "the State's objectives and interests" in the coastal zone.

2. Develop criteria, policies, etc. for testing proposed alternatives to reconcile conflicts identified.

3. Develop alternatives and recommend best one, to reconcile the identified conflicts.

I. Prepare First Draft of 1972 COAP.

1. Edit and review individual contributions for consistency, contents and format.

2. Revise as needed in cooperation with contributors.

3. Prepare illustrations as needed.

4. Reorganize as required.

5. Prepare manuscript for printer.

J. Conduct Public Discussions.

1. Print first draft and distribute copies for review.

2. Publicity announcements, press releases, etc.

3. Hold public hearings on various segments of the COAP.

II. Phase III (not part of this application)

A. Consider testimony of Public Discussions.

1. Reduce transcripts of hearings.

2. Review testimony.

3. Discuss with planning team and other interested parties.

B. Prepare Final Draft Incorporating all Reactions to First Draft.

1. Revise and edit.

2. Coordinate with chapter editors.

C. ICOR Approval.

1. Coordinate with executive and legislative bodies and members.

D. Prepare Final Printer's Copy.

1. Make any changes required by above bodies.

2. Coordinate with chapter editors.

E. Print COAP.

1. Liaison with printer.

F. Distribute Published COAP.

1. Forwarding to CMC for review.

2. Forwarding to the Governor for action.

NOTE: All of the above items will include, but not necessarily be limited to, those (as shown on pages 9-12) in the study design dated January 1970.

Outline of Work Program

1. Prepare a study design for the preparation of a statewide aviation master plan including the provision and acceptance of inputs, coordination and cooperation with complimentary efforts in the Los Angeles, San Francisco and other areas of the State. It is anticipated that the study design will include the following elements and lead to their accomplishment during the project period:

   a. Analysis of the Existing System including:

      1) Aircraft Characteristics

      2) Airspace utilization and controls

      3) Airport locations and characteristics including navigational aids

      4) Existing-airport service areas

      5) Physical environment

      6) Other transportation systems and data

      7) Other technology

      8) Current air transportation demand including cargo and general aviation

      9) Origin and destination of passengers and cargo

   b. Project Future Systems Requirements to 1975, 1980, 1990, 2000 including:

      1) Origin and destination of passengers and cargo

      2) Required linkages to other transportation systems (alternatives)

      3) Physical facilities to meet demand (alternatives)

4) Environmental requirements

5) Airspace utilization and control needs

c. Establish preliminary objectives and criteria for system development and service.

d. Identify system alternatives and system service alternatives including:

1) Physical facilities including location

2) Airspace utilization and control

3) Linkages to other transportation systems

4) Environmental requirements

5) Timing

e. Evaluate cost-effectiveness and cost-benefit of alternate systems and their components using model or other appropriate techniques. This evaluation will include but not be limited to the following:

1) Evaluate existing and forecasted passenger and commodity demand with respect to existing airport capacity in the planning area.

2) Determine where there is over utilization and under utilization of existing airports.

3) Determine the approximate location of new airports and service facilities when indicated by the existence of excess demand and/or excessive origin to airport travel time.

4) Determine the need and effect of closing airports as indicated by a deficiency in demand or function.

5) Evaluate the incremental cost, revenue and effectiveness of providing additional airports and airport services facilities. This analysis considers the effect on the demand for existing airports when new airports are provided. It also considers the additional demand including service facilities which will be generated by the installation of new airports.

6) Determine airspace needs and controls required by system effectuation.

7) Perform a sensitivity analysis on the variables and parameters of the problem. The purpose of this analysis is to determine the sensitivity of the location of new airports, the closing of existing airports and the modification of traffic flow at and between airports to the following:

(a) Forecasted demand.

(b) Characteristics of future aircraft (passenger carrying volume and speeds) as it relates to passenger demand and type of airport required.

(c) Acceptable travel time to and from an airport.

(d) Surface congestion as it relates to surface travel time.

(e) The planning horizon or point in time when an airport will reach capacity.

(f) Airport construction costs.

(g) The economic effect on property values of locating an airport in a given area.

(h) Future modes of travel to and from an airport.

(i) Cost of capital used in economic evaluation, and the uncertainty associated with future cash flows.

f. Evaluate alternative systems and select for formalization that system and its service system which best meets the objectives and needs of the state.

g. Prepare a statewide aviation plan including the following:

1) A system of airports to serve all aviation needs

(a) Standards for airport location construction environment, operation, maintenance and protection.

(1) Definition of standards to be applied to each airport in the system including recommended timing of application.

2) A system of airspace control and navigational aids to serve all aviation needs.

3) A system of airport access

(a) Definition of needs for each airport in the system and recommendation of timing.

4) An identification of responsibility for the accomplishment of each plan recommendation including location, construction, operation, maintenance, protection, acquisition and financing.

h. Prepare a plan implementation program including:

1) An identification of revenue needs, timing and source for plan recommendations that are a state responsibility.

(a) Preparation of a schematic design for major facilities which are assigned as a substantial state responsibility.

(b) Estimate costs of meeting responsibilities, recognizing programmed timing of accomplishment.

(c) Project revenues and their allocation to responsibility accomplishment.

(1) Recommend new sources of revenue and the actions necessary to achieve them.

2) Determine state agency or agencies to be responsible for final design, construction, operation and/or maintenance of individual projects.

i. Assemble data and methodology in a computer based form to permit retrieval by all types of users and in a form that will permit updating on an element basis.

URBAN GEOLOGY STUDY

Description of Planning Work

I. Phase 1 (first year)

A. Present and Potential Urban Geology Problems. This step will collate urban growth projections with geologic characteristics. Planning regions established in 1965 for California will be used as applicable. The results of this section will establish the principal geographical parameters of the problem.

1. Urban Growth. Utilize existing data to determine areas of probable urban development and urban renewal in the years 1975, 1980, 1990 and 2000. Consider the following:

urban/industrial growth

urban renewal

transportation systems

public utilities

2. Identification of local and regional geologic problems in areas of anticipated development. Determine the kind, intensity and extent of geologic hazards in areas of probable urban development and urban renewal. Consider the following:

active faults

seismic activity and earth materials response characteristics

unstable earth materials

subsidence

erosion

volcanic activity

tsunami vulnerability

3. Identify those mineral resources that are essential to the continued economic growth of the State. Determine their location and compare with urban development and renewal patterns. Identify those deposits which should be protected from urban sprawl at which might be utilized during the urban renewal process. Give special attention to construction materials such as sand, gravel and limestone.

B. Critique and review geologic studies, approaches and techniques used to resolve geologic urban development conflicts and recommend improvements for same. This information will assist in identifying weaknesses in past efforts and serve as a future data bank.. Evaluate approaches used in other areas (such as Japan and Illinois) on problems similar to those in California.

C. Define criteria for priorities of urban geology efforts. These will be based on the present and future distribution of people and land use, the extent and severity of geologic hazards related thereto, and the overall effect on the State.

California has not established overall criteria for priorities in attacking urban geology problems. Consequently, maximum benefit is not derived from the activities of the numerous elements working on the problem.

D. Establish program priorities by application of the criteria defined in 1, above.

E. Identify existing government and private policies, programs, responsibilities and capabilities. Inventory these and compare them to the priorities established in 2, above. Gaps and overlaps in the policies, programs and responsibilities of all elements will be identified and solutions proposed.

Examples include:

1. Jurisdictional responsibilities of public and private agencies.

2. Methods of data collection and systems of data exchange.

3. Organization and coordination of efforts in urban geology.

4. Methods of presenting the results of urban geology studies for maximum use.

5. Emergency preparedness plans for geologic disasters.

6. Local planning, zoning and regulatory needs.

7. Financial liability for the loss of life and property damage during a geologic disaster.

8. Public education needs and systems.

II. Proposed Phase II findings, alternatives, conclusions and recommendations will be reported in the following format:

A. Goals and policy for the State of California.

B. State, federal and local governmental and private sector responsibilities.

C. Programs and financing.

D. Legislation.

E. Method of implementation.

F. Future studies.

PURPOSES OF THE PROJECT FOR

URBAN TRANSPORTATION PLANNING RESEARCH AND DEMONSTRATION PROGRAM

CALIF. PD-7

To develop a policy and organizational structure for the assignment of transportation planning responsibilities in the State and its Business and Transportation Agency, as a mechanism for developing a Statewide transportation plan and policies.

To recommend related responsibilities of other agencies in the State (city, county, regional and Federal) engaged in transportation planning, in order to have a clear definition of the hierarchy of responsibility and necessary interrelationships. This definition will be aimed at methods for developing alternative urban transportation systems and developing cooperative systems selection procedures for meeting the total urban transportation needs of California.

To develop a systematic resource allocation procedure to evaluate alternative urban transportation systems. This framework is to encompass the relationships between transportation and comprehensive urban development and with the impact of transportation services on communities and people in furtherance of overall State development planning and policies. Emphasis will be given to urban portions of a Statewide transportation system because of the critical nature of transportation needs in the urban areas of the State.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
450 GOLDEN GATE AVE., P.O. BOX 36003, SAN FRANCISCO, CALIF. 94102

DEC 30 1970

REGION IX

Office of the Regional Administrator

IN REPLY REFER TO:
9MP

Col. Charles R. Roberts
District Engineer
Dept. of the Army
S.F. District, Corps of
Engineers
100 McAllister Street
San Francisco, California 94102

Dear Col. Roberts:

Subject: Bay Area In-Depth Study

Enclosed please find a narrative discussion of the relationship between the current U.S.G.S. Bay Region Environment and Resources Planning Study and the In-Depth Study. Because of HUD's existing participation in the U.S.G.S. study, we have determined that a logical HUD input would be through coordination of the two efforts augmenting the U.S.G.S. work program to accommodate the interests of the Corps.

You will note that this constitutes an extension of input estimates submitted in our letter of December 22. We have determined that close coordination of these two studies at the Environmental Quality level will be useful; there remains the problem of detailing the additional work involved and assigning it approximately according to the cost estimate. We shall have these details worked out before January 15.

Sincerely yours,

Robert H. Baiche
Regional Administrator

Enclosure

HUD INPUT: RELATIONSHIP OF THE
U.S.G.S. PLANNING STUDY TO C.O.E.
IN-DEPTH STUDY

The San Francisco Bay Region Environment and Resources Planning Study, currently underway, is directly related to the Corps study mission in the Bay Area and should be included in the In-Depth Study.

The Department of Housing and Urban Development is a participant with the United States Geological Survey in the conduct of the three year Bay Region study. Although the USGS is providing most of the staff capability for this effort, HUD is contributing funds totalling approximately 25% of the overall cost of the study. HUD's special interest in this study is the improvement of the utility of earth science information for the urban regional, county, and municipal planning process.

Commencing in FY 1972, HUD anticipates the development of a capability, within the study, for understanding the special needs and problems of the planning process which bear directly on the effective use of earth-science information.

We hope to conduct a number of important inter-disciplinary sub-studies: state-of-the-art analysis, i.e., the current use of earth science data in the institutionalized planning process; the development of urban planning interpretative methodologies which would provide the urban regional and sub-regional planner with the capability necessary to translate earth processes in to terms directly significant to generalized land-use and major public facility planning, and at varying areal and governmental/jurisdictional levels, i.e., regional and county.

The interests of the Corps and the In-Depth Study could be served by extending these studies to include: 1. a consideration of earth science data in the port-planning process and, 2. the general implications of earth science data in the (a) new location of or expansion of port facilities and (b) the attendant development of land indirectly related to port facilities.

At this early stage in the Bay Region study design, cost estimates are imprecise. Experience to date in the development of inter-disciplinary sub-studies suggests the extension of our efforts to directly include Corps interest, as outlined above, would require approximately two man-years of professional and sub-professional effort. The costs are estimated at $50,000 subject to modification according to more detailed estimates of our input.

We are most interested in pursuing this proposal in detail with you at your earliest convenience.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
450 GOLDEN GATE AVE., P.O. BOX 36003, SAN FRANCISCO, CALIF. 94102

JAN [illegible]

REGION IX
Office of the Regional Administrator

IN REPLY REFER TO:
9M

Col. Charles R. Roberts
District Engineer
Dept. of Army, S.F. District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Col. Roberts:

Subject: San Francisco Bay Area In-Depth Study

The suggested HUD input to the subject study, modified according to latest negotiations with the Corps of Engineers (meeting December 29), is as follows:

Cost estimate: $240,000 for four years
Approximate distribution according to study areas:

Social Well-Being	$120,000	(one-man/four years)
Transportation	60,000	(one-half-man/four years)
Environmental Impact	60,000	(one-half-man/four years)

For the purpose of the study, HUD is prepared to retain one staff member for four years as an annual cost of approximately $30,000. This person's function will be to monitor and to provide assistance to selected consultant services. HUD official policy is to guide and strengthen local participation in the actual planning process and to provide additional means by which the products of HUD's monitoring can be fed back into the process.

The total cost estimate includes these services and incidental clerical help.

Sincerely yours,

Andrew J. Bell III
Acting Regional Administrator

U.S. DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS
450 GOLDEN GATE AVENUE • BOX 36017

SAN FRANCISCO, CALIFORNIA 94102

November 4, 1970

Colonel Charles R. Roberts
District Engineer
Corps of Engineers
Department of the Army
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

We are reviewing the plans for the San Francisco Bay Area In-Depth Study and will be able to provide you by November 13 with preliminary information concerning funding requirements and the role which we intend to play. I would like to point out, however, that the Bureau of Labor Statistics can make no useful contribution to the Transportation Systems Study, to which we have been assigned. This was pointed out at the October 5 meeting by Mr. Bruce Hanchett of my staff, who is our Coordinator for the In-Depth Study. During subsequent conversations with Mr. Dick Eng and Mr. Charles Elmore of your staff, it was decided that the Bureau should participate in the Social Well-Being Impact Study. Will you please see that this change is made in your Federal Agency Participation Matrix.

Sincerely yours,

Charles Roumasset

CHARLES ROUMASSET
Regional Director

U.S. DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS
450 GOLDEN GATE AVENUE - BOX 36017
SAN FRANCISCO, CALIFORNIA 94102

December 4, 1970

Colonel Charles R. Roberts
District Engineer
Corps of Engineers
Department of the Army
100 McAllister Street
San Francisco, California

Dear Colonel Roberts:

Listed below are five alternative proposals for Bureau of Labor Statistics participation in the San Francisco Bay Area In-Depth Study. The Bureau is willing to accept any one or any combination of these alternatives.

1. Consult with and advise the Corps of Engineers and other participating Federal agencies on economic base and impact studies. Attend meetings upon request, review and comment on on-going work of participating agencies, advise on appropriate uses of BLS and related data, and provide guidance as to whether the overall assumptions used in the Bay Area Study are in line with national projections of labor force, employment, gross national product, industry output, and occupational patterns developed by the Bureau.

   This will be on a reimbursable basis of $35,000 per annum, starting July 1, 1971. This is the minimum level of support and the cost estimates for the study alternatives listed below will be in addition to this minimum reimbursable level.

2. Conduct study of the impact of alternative levels of waterborne commerce and port activity on employment. This study would measure the direct employment associated with the operation and maintenance of the expanded port facilities, as well as direct employment of related supporting activities in the region such as transportation, warehousing, wholesale trade, finance, and other industries.

   The estimates would cover employment for each type of activity, and would cost $100,000.

3. Conduct study of the impact on employment of expanded levels of commerce and port facilities similar to that described in alternative 2 but including the occupational distribution of the employment generated. This alternative would cost between $150,000 and $200,000.

4. Conduct a construction labor requirements study. This would provide estimates of on- and off-site labor manhours requirements by occupation for fixed dollar amounts of construction of port facilities as well as estimates of materials requirements from supporting industries. This would be similar to studies the Bureau has conducted for other types of construction and would be based on collection of data from general and prime contractors, subcontractors, and studies of port development projects in San Francisco, New York, New Orleans, and other major ports.

   The cost of this study would be $100,000.

5. Make employment and related projections for the Bay Area. The complexity and cost of this study would depend on several factors. A review would be made of economic base studies and projections already completed to determine how much information if any is appropriate for the In-Depth Study. If existing studies can be modified to fit the framework of the study, the cost of this alternative would be $50,000 to $100,000 per year for a 2-year period, or a total of $100,000 to $200,000. On the other hand, if the review of the existing economic base studies and projections indicate the need for a major study, the cost would be substantially more and would depend on more precise identification of the activities to be studied and the degree of disaggregation of each of the items necessary for other phases of the project.

   The cost of this study would be $150,000 to $200,000 per year for a 2-year period, or a total of $300,000 to $400,000.

These cost estimates are, of course, preliminary and subject to revision. We plan to follow this letter with a more detailed statement of each of the study alternatives and, in addition, Mr. Jack Alterman, Director of the Bureau's Economic Growth Studies, will be discussing our participation with members of the staff of the Division Engineer on December 9.

Sincerely yours,

Charles Roumasset

CHARLES ROUMASSET
Regional Director

U.S. DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS
450 GOLDEN GATE AVENUE • BOX 36017
SAN FRANCISCO, CALIFORNIA 94102

December 28, 1970

Colonel Charles R. Roberts
District Engineer
Corps of Engineers
Department of the Army
100 McAllister Street
San Francisco, California

Dear Colonel Roberts:

Following is a more detailed statement of five alternative proposals for Bureau of Labor Statistics participation in the San Francisco Bay Area In-Depth Study. This is a followup to my letter dated December 4.

1. Provide consulting service to the Corps of Engineers' study of the San Francisco Bay Area and the impact of expansion of port facilities on the area. This will include (a) attendance at meetings upon request, (b) limited review and comments on material developed by others which may fall within the expertise of the Bureau of Labor Statistics, and (c) advice regarding appropriate use of data developed by BLS. The latter may cover both questions of substance and methodology.

   In general, it would include some guidance as to whether the overall economic assumptions used for the San Francisco Bay Area Study are reasonably in line with the national projections of labor force, gross national product, industry output and employment, and occupational patterns developed by the Bureau.

2. The operation of the expanded port facilities required to handle substantially increased tonnage of imports and exports will obviously generate more employment in the various port activities, but also in a whole host of direct supporting activities. The former would include the loading and unloading operations, the warehousing activities, and general maintenance activities for both. The latter would include the transportation and distribution activities needed to get the increased tonnage of imports and exports into and out of the port area and the San Francisco Bay Area. There would also be additional repair services required, including ship and truck repair, insurance on cargo, and a variety of services directly related to the trans-shipment of cargo into and out of a major port.

Given the level of cargo, by type, to be handled by the target date (period through 2020), and the expanded port facilities put in place to handle the expanded trade, the Bureau of Labor Statistics would develop estimates of the employment required to operate and maintain the expanded port facilities and the direct supporting activities, e.g., transportation, distribution, repair, etc.

3. In addition to the gross or incremental estimates of the changing manpower requirements resulting from the expanded port operations as described in alternative 2, the Bureau will provide estimates in the greatest occupational detail possible of the changing manpower requirements in activities resulting from this expansion and the direct supporting industries. Estimates of occupational employment will be developed for such direct supporting industries as transportation, wholesale trade, warehousing, etc., in the base year as well as for the target year of the projections. This work will be done, based not only on the Bureau's national industry occupational matrix using any information from the 1970 Census of Population, but will also include visits of regional office personnel to industry establishments in the San Francisco Bay Area considered to be direct supporting industries and activities.

4. The proposed Bay Area development of navigable waterways and adjacent lands will have a major impact on construction labor requirements in the San Francisco Metropolitan Area. Information will be needed on the size and occupational requirements of the labor force and the types and amount of materials needed to expand the port facilities. BLS proposes to study port development projects which have already been constructed in San Francisco, New York, New Orleans, and other ports in order to determine the labor requirements and the materials which would be used in port construction in San Francisco. The sample studied will depend on the nature of San Francisco construction, e.g., bulk facilities, terminals, warehouses, etc.

   The methods used in collecting data will follow the procedures used successfully in BLS surveys for other types of construction. General, prime, and subcontractors will be interviewed and information will be collected on the number of man-hours, and the amount of materials generated by a fixed dollar volume of port construction. Estimates will be prepared on man-hours required at the proposed time of construction. They will include on-site construction employment by occupation and, if desired, off-site employment required to produce and deliver materials to the construction site. The study will provide a detailed listing of types and amounts of materials used per fixed dollar value of construction.

   The basic data will be collected by BLS field representatives from port quthority officials, local contractors, subcontractors, architects, and other direct participants.

5. The work on projection of economic base for the San Francisco Bay Area depends on the extent to which existing economic base studies and projections can be used with limited adjustments and modifications for this purpose. If they can be used in this manner, then it may be possible to develop a reasonably detailed set of projections for $50-100,000 per year for a 2-year period or a total of $100-200,000.

   On the other hand, if a review of existing economic base estimates and projections indicate the need for a really major study the cost would be substantially more. Such a major study might include some data collection, but would in any event involve a large scale data integration project, analysis of data to discern trends and the factors underlying these trends and finally a projection of these trends as they affect the economic base of the San Francisco Bay Area. The key to how extensive and detailed such a study would be would depend on the nature of the critical questions which need to be answered in order to provide a framework for an evaluation of the impact on the area of expanded port activity and all its related needs. Among such critical questions are the type of projections needed, i.e., population, labor force, employment, economic activity, and the degree of disaggregation of each of these items necessary for other phases of the project. For example, is overall economic activity sufficient or is a knowledge of the portion to be found in manufacturing, construction, services, or trade also important? Similar questions exist concerning the degree of detail needed in the employment projections. Further, in analyzing the impact of port construction is it necessary to know the impact on other types of transportation such as truck and rail; also, is the expanded port to have an impact on area allotted to housing, commercial or industrial development? If so, will this affect the level of economic activity and so forth.

   The study would, of course, need to take account of existing national, regional, and State projections to insure consistency to the extent feasible. One facet of the effort to achieve consistency would be to use the basic commodity-trade flow study and the economic assumptions and projections underlying that study as a starting point for the economic base projections.

The cost estimates for each of the five alternatives are the same as those given in my December 4 letter.

Attached are copies of two bulletins which we had promised to send to Mr. Dick Eng. These present the results of studies conducted by the Bureau several years ago of labor and material requirements for public housing and civil works construction. Our proposal listed under

alternative 5 would involve a similar labor and material requirement study for port facilities.

Sincerely yours,

Charles Roumasset

CHARLES ROUMASSET
Regional Director

Attachments

UNITED STATES DEPARTMENT OF AGRICULTURE
ECONOMIC RESEARCH SERVICE
Natural Resource Economics Division
Rm. 210, 2020 Milvia St.
Berkeley, California 94704

September 3, 1970

Colonel Charles R. Roberts
District Engineer
Corps of Engineers
Department of the Army
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

This is in reference to your letter SPNED-RD dated August 24, 1970 to Mr. Robert V. Enochian and to his letter of September 2, 1970 to you.

As indicated in Mr. Enochian's letter, I would be pleased to coordinate any participation by the Economic Research Service in your San Francisco Bay Area In-Depth study. In accordance with the schedules contained in your letter, we will provide preliminary input information by September 21, 1970.

If you have any additional suggestions, I would be pleased to receive them.

Sincerely,

Ray Lanier

Ray Lanier, Leader
South West Resource Group, ERS,NRED

UNITED STATES DEPARTMENT OF AGRICULTURE
ECONOMIC RESEARCH SERVICE
Natural Resource Economics Division
Rm. 301, 2020 Milvia St.
Berkeley, California 94704

December 17, 1970

Col. Charles R. Roberts
District Engineer
Corps of Engineers
Department of the Army
100 McAllister Street
San Francisco, California 94102

Dear Col. Roberts:

This is in response to your request of August 24, 1970, that we provide you with a firm statement as to time and funds required by us to participate with the Corps and other agencies in the San Francisco Bay Area In-Depth Transportation Study. Development of our work elements has taken place over the last few months through discussion with your staff and with members of participating agencies. This specific statement is in response, particularly, to discussion in my office on November 27, 1970, with Mr. Dick Eng, of your office, and Mr. Walter Yep, of the South Pacific Division office, Corps of Engineers.

Economic Research Service participation will begin upon receipt of funds and is based on a four-year study program. Output from these efforts will contribute directly to three study areas: Commodity Flow, Social Well-Being Impact, and Developmental Concepts. In addition, an exchange with the Environmental Study Area is expected to be mutually beneficial. ERS is presently identified with the Transportation System Study Group. It appears that our input to that phase might best be made through the Commodity Flow Study Group; therefore, we request to be deleted from the Transportation System Group.

A general description of the work is outlined as follows. Current and projected value of agriculture food and fiber production are embodied in the so-called OBERS projections. In response to needs of the In-Depth Study, special investigation will be made of the food and fiber production projections for the San Francisco Bay tributary area and its relationship to the nation, world-markets and, especially the Pacific Basin countries.

Special emphasis will be given to the export commodity production patterns of the San Francisco Bay tributary area and, particularly, the Central Valley with an indication of that relationship to other West-Coast ports. Information will be provided on projections of food and fiber commodities,

the value of agriculture products, land use, and employment based on a range of transportation cost being developed by the Corps and the Transportation Study Group. During the evaluation phase, the impacts on food and fiber commodities of alternative transportation programs costs will be provided. Particular attention will be given to impacts in terms of change in resource use, employment, and income.

Costs of Economic Research Service input for this study is estimated at one and one-half professionals per year, with clerical support and computer services for an amount of $50,000 per year and a total of $200,000 for the four-year period. The annual total is estimated to be distributed in the first year among the several study areas as follows:

Commodity Flow	$10,000
Transportation System	---
Vessels and Port Facilities	---
Environment	2,000
Social Well-Being Impacts	28,000
Nation's Defense	---
Developmental Concepts	10,000
Annual Total	$50,000

We trust the work outlined meets your needs. If there are further comments, we would be pleased to respond.

Sincerely,

Ray Lanier

RAY LANIER, Leader
South West Resource Group

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
2020 Milvia Street, Berkeley, California 94704

September 11, 1970

Mr. Charles R. Roberts
Colonel, CE
District Engineer
100 McAllister Street
San Francisco, California 94102

Dear Mr. Roberts:

We regret the delay in answering your letter of August 21, however, in response to that letter we wish to designate as coordinator for our office, Mr. Charles W. Thomas, Assistant State Conservationist, Watersheds.

We believe our present inputs will be similar to those submitted to you in the meeting minutes transmitted to Mr. Voss on February 17, 1969.

We will continue to look forward to working with you in this matter.

Sincerely,

T. P. HELSETH
State Conservationist

cc:
Chas. W. Thomas

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

2020 Milvia Street
Berkeley, California 94704

November 16, 1970

Colonel Charles R. Roberts
District Engineer
U. S. Army Corps of Engineers
San Francisco District
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

As a follow-up of our discussion with Lieutenant Arthur R. Flegal of your staff we recommend the following land resource, conservation, and environmental quality inputs by SCS to subject study.

1. General soil map (2 or 4 inches = 1 mile) of nine San Francisco Bay counties to include soil properties, slope, erosion, soil drainage, and soil salinity. This general soil map can be increased to cover other counties or reduced as desired.

2. Interpretations of general soil map for presenting land use alternatives and potentials.

a. Agricultural land capability - identifies prime agricultural in accordance with California Land Conservation Act of 1965.

b. Range sites.

c. Woodland suitability groupings.

d. Waterfowl and wildlife suitability groups.

e. Vegetative soil groups for erosion control and beautification.

f. Soil erosion status and erodibility rating.

g. Soil drainage and water table.

h. Hydrological soil groups.

3. Development of alternative design of treatments needed to reduce sediment and agricultural waste pollutants. Consultation on plant species and land-shaping design to enhance scenic and landscape beauty.

Colonel Charles R. Roberts

4. Sediment spoil management for productive uses, erosion control, and beautification including levees and earthen structures.

SCS Costs by Years

Items	1971	1972	1973	1974	1975
1,2a	25,000				
2b,2c,2d,2e		40,000			
2f,2g,2h					
3,4			35,000	15,000	15,000
	$25,000	$40,000	$35,000	$15,000	$15,000
			TOTAL	$130,000	

Sincerely,

T. P. HELSET
State Conservationist

11/17/70

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
630 Sansome Street
San Francisco, California 94111

3520
September 8, 1970

Colonel Charles R. Roberts
District Engineer, Department of the Army
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

We have received the copy of Preliminary Plan of Study of San Francisco Bay Area In-Depth Study, which you sent to us on 21 August, 1970.

We appreciate being kept informed of the progress and objectives of this study, although we have no direct involvement or information to contribute. We will not need a copy of the final report, as presumably, copies will be readily available elsewhere.

Sincerely,

Paul J. Grainger

PAUL J. GRAINGER
Acting Regional Forester

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
REGIONAL OFFICE
50 FULTON STREET
SAN FRANCISCO, CALIFORNIA 94102

OFFICE OF
THE REGIONAL DIRECTOR

December 3, 1970

District Engineer
U. S. Army Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Attention: Mr. Richard Eng

Gentlemen:

We have reviewed the material supplied relative to the Corps of Engineers' "San Francisco Bay Area In-Depth Study".

Our attention was particularly directed toward the environmental, ecological, and social well-being objectives of the study. We understand that these objectives, among others, would be used as bases for evaluating different navigation development alternatives. We do have an interest in these matters, but we believe our involvement will largely be indirect - that we will be concerned through State and metropolitan agencies which have direct concern. For example, in health matters, the State Comprehensive Health Planning Council, and the Bay Area Health Planning Council, will be directly concerned, and we do work closely with these agencies.

Likewise, the Association of Bay Area Governments (ABAG), the Air Pollution Control District, and the Bay Area Conservation and Development Commission, are local entities with whom we work, who would have direct concern with the project. We trust that these entities are included in your study.

We would appreciate your asking the chairman of these study groups to keep us advised as matters of apparent interest develop. We are interested in your study and will expect to make an input as developments indicate.

Sincerely yours,

Robert Coop
Regional Director

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
REGIONAL OFFICE
50 FULTON STREET
SAN FRANCISCO, CALIFORNIA 94102

OFFICE OF
THE REGIONAL DIRECTOR

March 1, 1971

Colonel Charles R. Roberts
District Engineer
US Army Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Earlier your office had contacted us for comments on the San Francisco Bay Area In-Depth Study. It was our understanding that a representative of your office planned to contact us again, after we had studied the Plan of Study, to determine our participation in the study, particularly the Social Well-Being Analysis. For some reason, we have not been recontacted, hence this letter to give you our views.

The Social Well-Being Analysis, at first glance would appear to be an area where this Department should be in a leading position to help in this study. A second glance, however, discloses that the title includes:

Security of life
Security of health
Enhancing and preserving the quality of human environment
Personal income distribution
Inter-Regional employment
Population distribution

and we no longer feel confident of our capabilities in this very broad area.

We do feel that this Department has a stake in the Study, and should be involved with some input. Lacking competence in several of the areas, however, and lacking staff capability for most of the items as well as for an overall coordinator, we conclude that our role will be to respond with data, as requested, in those areas where we do have competence.

We regret that our role cannot be more meaningful. This has been the subject of earlier conversations between our staffs, and resulted in acknowledgement that our structure, function and staffing does not lend itself to the broad support we would like to give this study.

We understand that the Corps has funds for partial financing of the study. If personnel slots and funds are available, perhaps we can discuss a greater role for us.

We feel that this study may be a very innovative long range step in planning which may be of inestimable benefit to the Bay Area, and we do regret we cannot see a greater part of us in it.

Sincerely,

Robert Coop
Regional Director

SEP 14 1970

Col. Charles R. Roberts
District Engineer
Department of the Army
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Subject: SAN FRANCISCO BAY AREA IN-DEPTH STUDY

Dear Colonel Roberts:

This letter is in response to your August 24, 1970 letter to me regarding AEC participation in the San Francisco Bay Area In-Depth Study. As I discussed with Mr. Richard Eng on September 4, our records show no receipt of the April 7, 1969 letter or the preliminary plan report dated March 1969; nor are we aware of any prior AEC involvement in this study activity. Your letter of August 24, 1970 is the first notice this office has received of this project or of your interest in having the AEC participate in this effort.

We are informed that the Corps of Engineers did hold discussions with a number of federal agencies during the period between December 1968 and March 1969, in order to prepare the preliminary study plan, but that the AEC was not included in those discussions. I understand from my conversation with Mr. Eng that the basis for showing AEC participation in the study plan is the AEC's membership on the National Council on Marine Resources and Engineering Development and its marine-related functions and activities, as shown in the annual reports issued by the Council.

Because of the lack of any prior involvement on our part, and based on our initial review of the preliminary study plan, it is not clearly evident to us what contribution the AEC can make to the harbor development study. Further, any significant participation in such a study is a matter which we would have to review with AEC Headquarters. Lacking such a definition of our role in the study and the nature of the contribution we might make, it appears unlikely that we can furnish the information you have requested in your August 24 letter on the schedule shown therein.

SEP 1 4 1970

Col. Charles R. Roberts

We are interested, however, in cooperating in any regional study where the expertise and responsibility of the AEC might be of value. I have therefore designated Mr. John Philip of my office to be available to cooperate with your staff with regard to the contribution this office might make to your study.

Sincerely yours,

E C Shute

E. C. Shute
Manager

AMA:JFP

NOV 10 1970

Col. Charles R. Roberts
District Engineer
Department of the Army
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Subject: AEC PARTICIPATION IN SAN FRANCISCO IN-DEPTH STUDY

In my letter to you of September 14, 1970, I made an initial response to your request for AEC participation in the subject study and designated Mr. John F. Philip of my office to cooperate with your staff in this matter. Since then we have had the benefit of reviewing the Preliminary Study Plan, attending a general meeting called by your office on October 5 for the purpose of acquainting Federal agencies with the status of the study, and certain staff discussions between our respective offices.

Based on these considerations, we are now prepared to set forth our views concerning the participation of our agency, as follows:

1. The primary thrust of the study, as we understand it, has to do with long-range planning for port facilities in the San Francisco Bay Area. While there may be some atomic energy related considerations involved, as was discussed at the October 5 meeting, it appears to us that, at most, they would be peripheral to the basic study. We therefore believe that the role our agency could play in accomplishing the main purpose of the study would be a minimal one.

2. In those areas which do involve atomic energy considerations, however, we are quite willing to provide whatever cooperation and assistance may be required, particularly where the AEC has special expertise or responsibility. An example of such an area would be one involving radioactivity in the environment or ecology under study.

3. It may be helpful to your office in developing working relationships to understand the functions of this Field Office

of the Atomic Energy Commission. The primary responsibility of this office, the San Francisco Operations Office (SAN), is the administration of certain research and development contracts, such as those with the University of California for the Lawrence Radiation Laboratory and Stanford University for the Stanford Linear Accelerator Center, and includes other educational and industrial contracts the AEC has throughout the State of California. Our functions are basically those involved in administering several hundred R&D contracts and do not include any significant operating or programmatic responsibility. We are therefore limited, at this local level, in the degree of background and expertise we could bring to bear on some of the problems which may grow out of the study. We can, however, act as a channel to our Headquarters office in obtaining information, coordinating reviews, or providing such other specific assistance as may be required for the study.

4. In view of the general scope of the study and the limited AEC role we foresee, we have concluded that it would not be appropriate for us to participate as a member of the Steering Committee, as has been proposed in various study planning documents issued by your office. We would prefer to proceed on the basis of attending general meetings so that we may keep abreast of the study progress, responding to specific requests, and providing such specific information or reviews as may be mutually agreed upon, recognizing that in many instances this will require coordination with our Headquarters office.

5. With regard to funding requirements, we believe we can carry out our anticipated role as outlined above within existing staff and budget resources. It will not be necessary, therefore, to seek study funds via the Corps of Engineers appropriation channel for our participation, and thus no such funding requirements for AEC need be shown in the study plan documents.

The planning documents issued by your office call for a "Draft Final Statement" by 13 November and a "Final Statement" by 4 December. This letter should be regarded as constituting both statements.

Should further discussion of the above be required, please feel free to have your staff get in touch with Mr. John Philip, who will continue to work with your office on the subject matter.

Sincerely yours,

E C Shute

E. C. Shute
Manager

AMA:JFP

FEDERAL POWER COMMISSION
REGIONAL OFFICE
555 BATTERY STREET, ROOM 415
SAN FRANCISCO, CALIF. 94111

September 1, 1970

Colonel Charles R. Roberts
District Engineer
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Reference is made to your letter SPNED-RD of August 24, 1970.

We have reviewed the preliminary plan of study of the San Francisco Bay Area In-Depth Study. We believe the plan of study will yield a truly in-depth study except for one element which does not appear to be included and in which we are very much interested. This element is the consideration of electric power without which much of the industrial and commercial development which will be projected will not take place.

We believe that in considering electric power some thought must be given to the location and land requirements for generating plants located on the shoreline of the Bay. The land requirements will also include docking and storage facilities for fuel oil which may be required for operation and for substation and transmission facilities for the delivery of the electric power.

The requirements for condenser cooling water should also be considered as they affect the environment and ecology of the Bay. Once-through cooling would be desirable from the standpoint of aesthetics, but will probably have adverse effects on the marine life and ecology. On the other hand, cooling towers would maintain the ecology but are not very pleasing to look at.

We would be pleased to cooperate with you in the study by providing estimates of future power requirements of the Bay Area and identifying the number and size of power plants and transmission lines that may be required to serve the projected electric power load.

Colonel Charles R. Roberts September 1, 1970

Since it appears that our major area of participation in the study will be in connection with the location and possible effects of thermal-electric generating plants and associated facilities, I am designating Mr. George R. Bell, Engineer-in-Charge, Electrical Resources and Requirements, as the Federal Power Commission's coordinator for the study. He may be contacted by telephone at 556-5122. Mail for his attention should be addressed to the Regional Engineer, attention Mr. Bell.

Sincerely yours,

M. Boyd Austin

M. Boyd Austin
Regional Engineer

FEDERAL POWER COMMISSION
REGIONAL OFFICE
555 BATTERY STREET, ROOM 415
SAN FRANCISCO, CALIF. 94111

December 11, 1970

District Engineer
San Francisco District, Corps of Engineers
100 Mc Allister Street
San Francisco, California 94102

Subject: San Francisco Bay In-depth Study
(Your SPNED-RD) ER&R 57-B

Dear Sir:

With regard to our participation in the subject study, and more particularly with regard to Lt. Flegal's telephone conversations with me and Mr. Bell, I believe that we can contribute to the study most effectively in an advisory capacity. On this basis, our contribution would be made as part of our current program and no separate financing would be needed.

I understand from Lt. Flegal's explanation that the In-depth Study will give principal emphasis to navigation and associated developments and a second study, sometimes referred to as the "Triple-S" study, will deal with waste disposal and water use and treatment in the area of San Francisco Bay and the delta of the San Joaquin and Sacramento Rivers.

Since our interest is centered principally on land and water requirements of existing and projected electric power plants and transmission lines, including those located or projected for the Bay and Delta areas, we can probably contribute most to the second or Triple-S study.

Very truly yours,

M. Boyd Austin

M. Boyd Austin
Regional Engineer

B-315

Interstate Commerce Commission
450 Golden Gate Avenue
Box 36004
San Francisco, California 94102

November 25, 1970

Colonel Charles R. Roberts, CE
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, CA 94102

Dear Colonel Roberts:

Reference is made to your letter of 30 October 1970, regarding the San Francisco Bay Area In-Depth Study.

As you are probably aware, Mr. E. D. Murphy, Regional Manager, is ill and not available for review of the activities of the Committee to date.

I have consulted with our Washington, D.C. Office and am advised that no funds have been budgeted for the study.

Mr. Van Cleave of this Office will attend the next meeting of the Committee. I understand at this meeting the specific areas and boundaries of each agency's participation in the Transportation Systems Study will be defined. Upon receipt of this information, we can plan our future activities.

Sincerely yours,

C. E. Warner
Acting Regional Manager

cc: James L. Barbour
Special Assistant
Managing Director's Office

ASCS
UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE • WASHINGTON, D.C. 20250

DEC 24 1970

Colonel Charles R. Roberts
Department of the Army
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Your letter of November 23, 1970, to Mr. Lee A. Seidell, concerning the San Francisco Bay Area In-Depth Study, has been referred to this office for reply as it relates to USDA-CCC activities and use of the San Francisco Port System.

CCC use of the San Francisco Grain Terminal during calendar year 1970 has been very limited, as the elevator is being rebuilt; however, during this period 603,175 hundredweight of yellow grain sorghum were handled through such facility on a sale to Japan. In addition, CCC sold 28,433 bushels of white wheat that had been stored in this facility on a local sale.

The following allocations of CCC and USDA processed commodities were handled through the San Francisco Port Area (quantities shown are in the thousands of pounds):

Port	Flour 1/	Rolled Oats 1/	NFD Milk 1/	Misc 2/	Total
San Francisco	-	135	10,084	3,710	13,929
Alameda	-	4,140	5,468	486	10,094
Oakland	41,700	-	4,157	15,318	61,175
Richmond	-	1,700	3,282	402	5,384
Stockton	-	-	13,817	-	13,817
Sacramento	-	-	1,188	-	1,188
Totals	41,700	5,975	37,996	19,916	105,587

Colonel Charles R. Roberts

1/ The flour, rolled oats and nonfat dry milk were shipped against A.I.D. and voluntary agency requests under Title II of P.L. 480. For the most part, these shipments were made to Asian destinations; however, some shipments were made to destinations on the west coast of Central and South Americas.

2/ The miscellaneous shipments include canned fruits and vegetables, frozen meats, canned meats, and various other commodities. They were made to school lunch and welfare recipients in Puerto Rico, Hawaii, Guam, American Samoa, and the Trust Territory of the Pacific Islands.

CCC's purchases of grain products for export are made on the basis of offers f.a.s. United States port or range of ports named by the seller(s). CCC accepts offers predicated on the cost of the grain product, plus the cost of ocean transportation, which results in the lowest total cost delivered to the foreign port of intended destination.

As to CCC cotton or cottonseed oil and meal that may have moved through the Port of San Francisco, we were able to identify only 6,875 short tons of cottonseed meal that moved on a sale to Japan during the period August 1 through July 31, 1970; however, there may have been more. As to commercial cotton movement, we enclose a copy of a report by the Western Cotton Shippers Association which shows the movement of cotton through California port districts during the period August 1, 1969, through July 31, 1970.

We, of course, are interested in having modern and adequate port facilities through which to conduct our export programs. It is reasonable to assume that we will export commodities through the San Francisco Port Area in an amount equal to or in excess of that shown above for subsequent 12-month periods. It is CCC policy, of course, to distribute equitably export tonnage between all ports to the extent feasible.

We trust the foregoing information will be of service.

Sincerely,

Carl C. Farrington

Deputy Administrator,
Commodity Operations

Enclosure

WESTERN COTTON SHIPPERS ASSOCIATION
P. O. Box 4575
Fresno, California 93744

August 28, 1970 No. 48-18

FINAL COTTON MOVEMENT REPORT
From August 1, 1969 to July 31, 1970

We give you below the details of the movement of the cotton crop through California Port Districts. All figures are in running bales. Linters and Mexican cotton are not included in total movement through California ports.

COUNTRIES	Through LA & LB	Through S.F.	Through S.D.	TOTALS	LINTERS ALL PORTS	MEXICAN GROWTH through LA	MEXICAN GROWTH through ENSENADA
Belgium	1,871	5,319		7,190			5,547
England	1,430	80		1,510	2,306		
Finland	400			400			400
France	4,596	9,636		14,232			1,400
Germany	6,415	10,161		16,576	2,695		8,199
Holland	2,219	8,108		10,327			500
Hongkong	818			818			4,715
India	134,894	93,417	32,487	260,798			
Indonesia	58,379	4,041		62,420			
Italy	2,510	3,187		5,697			20,252
Japan	109,112	31,783	14,548	155,443	51,946		165,788
Korea	24,392	4,372	21,337	50,101			510
Pakistan	4,868	528		5,396			
Philippines	19,238	3,412		22,650			
Poland	856	1,556		2,412			
So. America	3,000	675		3,675			700
Spain	510	1,508		2,018			
Sweden	1,140	200		1,340			
Taiwan	27,497	4,008	3,401	34,906			3,546
Thailand	2,971	170		3,141			
Viet-Nam	30,911	9,525	3,010	43,446			
TOTALS	438,027	191,686	74,783	704,496	56,947		211,557

RAIL MOVEMENT TO:	CANADA	GULF	S. EAST	N. EAST	TOTALS
From S. J. Valley points	8,350	101,784	786,307	2,532	898,973
From Arizona points	-0-	53,193	314,555	988	368,736
TOTAL BALES COTTON	8,350	154,977	1,100,862	3,520	1,267,709
TOTAL BALES LINTERS	995	3,787	28,326	12,448	45,556

ENCLOSURE

II-B STATE AGENCIES

1. CORPS OF ENGINEERS LETTER REQUESTING PARTICIPATION

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
100 McALLISTER STREET
SAN FRANCISCO, CALIFORNIA 94102

SPNED-R 12 November 1970

Mr. Norman B. Livermore, Jr., Secretary
The Resources Agency - California
P. O. Box 388
Sacramento, California 95802

Dear Mr. Livermore:

This is to confirm our meeting on 24 November 1970, 1:30 to 3:30 P.M. in your office, to discuss the San Francisco Bay Area In-Depth Study. The arrangements for the meeting were made through Mr. P. Clifton of your staff.

The In-Depth Study was authorized in October 1967 in a Resolution by the Committee on Public Works of the House of Representatives. The scope of the authorized navigation investigation departs significantly from previous Federal programs as it is essentially regional in character. In March 1969, a Preliminary Plan of Study was prepared for the In-Depth investigation and presented to the House Appropriations Committee for review. A copy of the Preliminary Plan of Study is inclosed.

After review of the Preliminary Plan, the Congress directed that initial public hearings be held on the In-Depth study and a Detailed Plan of Study be prepared for Congressional consideration in March 1971. Compliance with the March 1971 date requires that the Detailed Plan of Study be forwarded from this office in early January 1971 to higher echelons of the Corps of Engineers.

Three public hearings were held on the study in June 1970 at Oakland, Martinez and Sacramento. State of California agencies that presented oral and/or written testimony were:

a. Department of Public Health, Bureau of Sanitary Engineering, Berkeley, California.

b. Department of Water Resources, Central District.

c. Department of Commerce, Division of Economic Development.

d. San Francisco Bay Conservation and Development Commission.

e. State Water Resources Control Board, San Francisco Bay-Delta Water Quality Program.

f. Department of Fish and Game.

g. Department of Navigation and Ocean Development, Coastal Zone Management Branch.

Testimonies e and f were transmitted through your office by Mr. A. Alan Hill in a letter dated 7 July 1970.

Testimony received at the public hearings and Federal and State laws and policies established since March 1969 have required that the Detailed Plan of Study, now in formulation, depart from Preliminary Plan concepts in several areas. Greater emphasis is being placed on regional navigation definition, environmental factors and the social well-being potential associated with waterborne commerce.

Our development of the Detailed Plan of Study indicates that there may be State agencies which have an interest in the study, that did not testify at the public hearings. These agencies are:

a. Department of Conservation.

b. State Reclamation Board.

c. Department of Parks and Recreation.

d. Department of Finance.

e. State Lands Commission.

f. Department of Public Works (Division of Highways and Division of Bay Toll Crossings).

SPNED-R 12 November 1970
Mr. Norman B. Livermore, Jr.

It is the present conclusion of the Corps of Engineers that the San Francisco Bay Area In-Depth Study will provide significant information and data on the future of navigation and waterbourne commerce to be of substantial benefit to the State of California. Also, it is concluded the successful completion of the study is dependent upon extensive exchange of State and Federal information, data and viewpoints. Because of the concluded significant relationship of the State to the study, it appears appropriate that the forthcoming Detailed Plan of Study have a written statement reflecting the overall position of the State of California on the study; perhaps from your office and supported by individual agency comments if appropriate.

The January 1971 date for the completion of the Detailed Plan of Study is recognized as presenting a serious time problem relative to a written statement of position on behalf of the State of California. To allow the maximum possibility of such a statement, however, we propose to present at the meeting on 24 November, sufficient material of pre-draft report content for State evaluation. Adequate copies of material presented will be given to meeting participants for subsequent review and consideration. It would be appreciated, therefore, if your office would invite to the meeting, the appropriate representatives from each of the State agencies cited above which testified at the public hearings or appear to have a significant interest in the In-Depth Study. The contacting of any other State agency you feel should attend would also be appreciated. The proposed procedure was discussed with Mr. Clifton when our meeting date was established.

If you have any questions concerning the meeting, please contact my office (415) 556-3660.

Sincerely yours,

1 Incl
As stated

CHARLES R. ROBERTS
Colonel, CE
District Engineer

II-B STATE OF CALIFORNIA

2. RESPONSE OF STATE AGENCIES

NORMAN B. LIVERMORE, JR.
SECRETARY

RONALD REAGAN
GOVERNOR OF
CALIFORNIA

OFFICE OF THE SECRETARY
RESOURCES BUILDING
1416 NINTH STREET
95814

Department of Conservation
Department of Fish and Game
Department of Harbors and Watercraft
Department of Parks and Recreation
Department of Water Resources

Air Resources Board
Colorado River Board
State Lands Commission
Office of Nuclear Energy
State Reclamation Board
Regional Water Quality Control Boards
State Water Resources Control Board

THE RESOURCES AGENCY OF CALIFORNIA

SACRAMENTO, CALIFORNIA

JAN 7 1971

Colonel Charles R. Roberts
District Engineer
Department of the Army
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Agencies and departments of the Resources Agency and other concerned State departments have reviewed the Detailed Plan of Study presented at our November 24, 1970 meeting on the San Francisco Bay In-depth Study.

The Detailed Plan of Study for this monumental investigation identifies or suggests some elements which could offer direct and timely benefits to the State. Such elements are:

The effect of enlarging navigation channels on salinity intrusion and any added costs of repelling ocean salinity associated with a navigation project as well as the environmental and economic effects of failure to do so.

The development of methods of commodity transfer which could provide a competitive alternative to increased channel depths in California's estuaries, waterways and near-shore waters.

The determination of the ecological effects of spoil and other waste disposal in the ocean.

The determination of whether potential channel enlargements would expose freshwater aquifers to the salt waters of the Bay and what measures would be necessary to protect local users of ground water from any adverse effects.

The effects of channel enlargements on existing and potential pollution problems in the Bay and Delta.

The impact of various levels of deep-draft and pleasure craft traffic on Delta levees.

Colonel Charles R. Roberts

Specifically, the State's waterborne transportation plan now under consideration could benefit from several of the above elements. This plan, which will draw upon other federal and non-federal studies is expected to be completed at far less cost for the entire State than the Corps' proposed study for the Bay.

From a broad perspective, the important question must be raised as to the real merit of a study of this estimated magnitude based solely on a resolution by which the House Committee on Public Works requests the Board of Engineers for Rivers and Harbors "...to review the reports on San Francisco Bay and all tributary deep water ports...". While it is recognized that there are areas of concern not yet studied in the Bay Area, realistic priorities indicate that funds may be more desperately needed to follow up the array of investigations already completed or on other studies of greater merit. (For example, the extension of the present Northern California harbor of refuge study to include Southern California would be of immediate, direct benefit to the State.) California, with ten percent of the population and approximately nineteen percent of U. S. foreign trade passing through its ports received only 2.7 percent of last year's Federal appropriations for navigation projects. Clearly, we must carefully rank those needs which can be financed only from this source.

Along with this concern we must recognize that current fiscal limitations in California reduce the ability of the State to participate and to protect its prerogatives in many of the fields proposed for analysis and alternative identification. A key example is the transportation systems segment which we feel is largely the prerogative of the State's Business and Transportation Agency, and which is actively pursuing its mandate to prepare a state-wide transportation plan. This effort, building on the recommendations of the Governor's Task Force on Transportation, should be the foundation of any such comprehensive transportation planning and analysis.

The deep-draft navigation element of the State's transportation plan is the responsibility of the Department of Navigation and Ocean Development and, while this element is directly related to the Corps' annual and historic efforts, the Department has not yet been budgeted adequately to contribute the required State input to an undertaking of the scope contemplated.

The State is likewise concerned with the treatment of the legal and institutional matters to be considered by the study and its ability to monitor and apply the State's discretion to a study of the proportions currently envisioned by the Corps constitutes a sum which is not now available for this purpose among the departments of the State Government.

Colonel Charles R. Roberts

We are also aware of a number of other studies of considerable magnitude in the Bay Area which raise our concern for unnecessary overlap and duplication. Such studies as the HUD-USGS geologic investigation, the Bay-Delta Water Quality Study, and the proposed Corps water quality study are not definitively related to the Bay in-depth proposal in the study design.

In summary, we believe the San Francisco Bay In-Depth Study should be carefully designed to contain only those elements which are of clear benefit to the State. Benefits from such a re-scoping would include a considerable reduction in cost and a time frame of less than five years.

The above illustrations of potentials for duplication of programs and inclusion in federal studies of items of little or no benefit to the State point up the need for an early conference of all interested parties to discuss a means of improving coordination in order to eliminate some of these conflicts and overlaps.

Pertinent to the logic of this suggestion, it seems to me, is the theme expressed in the most interesting November 1970 letter of the Conservation Foundation. This speaks generally of the complexity of State efforts in the environmental field and the great importance of efficient State - Federal relationships. Some key quotes from this letter follow:

> "It has become increasingly clear that, despite the many important federal programs designed to achieve environmental quality, much of the job must be done by state governments...they (the states) are strategically situated; And they have many of the inherent as well as assigned powers needed to cope with environmental problems."

We appreciate the courtesy of the Corps in making study material available to the State for its review and comment and we sincerely look forward to a continuing and productive relationship with you. Further, should you decide to reduce the study plan in scope, as we suggest, we would be pleased to offer such assistance as desired. Should there be additional information available which you feel has not been considered by the State, we would be pleased to discuss it with you.

Sincerely yours,

Secretary for Resources

cc: Brigadier General Frank A. Camm

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
100 McALLISTER STREET
SAN FRANCISCO, CALIFORNIA 94102

SPNED-R

28 January 1971

Mr. Norman B. Livermore, Jr., Secretary
The Resources Agency - California
P. O. Box 388
Sacramento, California 95802

Dear Mr. Livermore:

I wish to thank you for your letter of 7 January 1971 presenting comments of departments and agencies of the State of California on the Detailed Plan of Study for the San Francisco Bay Area In-Depth Study. Your letter notes several of the elements of the In-Depth Study that will offer direct benefit to the State of California at an early date.

I feel that it is appropriate to comment on the reservations concerning the In-Depth Study that are expressed in your letter to be certain that you and your staff are kept fully informed on the content and conduct of the study and to assure you that our procedures in carrying out the study will allow you ample opportunity to protect the prerogatives and interests of the State of California. To this end, Colonel W.E. Vandenberg of my staff met with Mr. Ford Ford and Mr. Paul Clifton of your staff on 18 January 1971 to discuss procedures for coordinating our study effort with the various departments and agencies of the State of California. I understand that as a result of this discussion, Mr. Clifton has been designated as the point of contact for such coordination for The Resources Agency and for all other interested State departments and agencies. Further, I understand that the State recognizes the benefits that will accrue to the State as a result of the major subordinate study analyses to be conducted as a part of the In-Depth Study. In addition, it was considered that the State's potential participation in the study would include Advisory Committee activities, review comment on drafts of the study report and component technical memoranda, plus the furnishing of data already available in State reports and studies or which will become available through the State's on-going programs. No new study or data collection effort by the State in support of the In-Depth Study is contemplated. The value to the In-Depth Study of information to be derived

from State, regional and local agencies in the form of reports available or expected to become available during the conduct of the study is estimated as approximately equal to the planned Federal appropriations for conducting the study. The Advisory Committee will provide overall integration of effort and guidance to the six major study analyses throughout the course of the In-Depth Study; agencies represented include the Department of Navigation and Ocean Development, the Department of Fish and Game, the San Francisco Bay Area Conservation and Development Commission and the Metropolitan Transportation Commission. The Advisory Committee should provide an excellent vehicle for presenting State views and protecting State interests.

In regard to relative costs of the In-Depth Study of the San Francisco Bay Area and the State of California's waterborne transportation plan, it is pertinent to note that the In-Depth Study is of substantially greater scope. The major difference in scope appears to be the extent of evaluation required for identifying Federal interests. Here, the In-Depth Study will cover in great depth the environmental aspects (21% of total costs) and social well-being aspects (17% of total costs) of development of waterborne commerce in the San Francisco Bay Area. The component commodity flow analysis builds on a base of world trade projections, successively narrowed to the Pacific basin, U.S. trade, and West Coast trade before focussing on the Bay Area. As your letter points out, this analysis will provide base data for the State's waterborne transportation plan. This degree of scope and magnitude in the In-Depth Study are clearly covered in the Resolution (H.R. Committee on Public Works Navigation Docket No. 1635, dated 19 October 1967) which authorized the study.

In regard to the interests of the State of California, I feel that each aspect of the In-Depth Study will be of benefit to the State; your letter cites several of these benefits. The study's Legal and Institutional Inventory, which of course will be coordinated with the State, may serve as a framework for State review of these matters and for protecting the State's ability to exercise its prerogatives and discretion in Federal-State relationships. My office will keep you fully informed on these matters on a timely basis.

Although it may not be specifically so stated in the text of the Detailed Plan of Study, we have taken pains to insure that unnecessary overlap and duplication with other studies does not occur. Public meetings and interagency coordination in preparation of the Detailed Plan of Study have addressed this point specifically. Federal agency studies will be coordinated through the multi-agency organization of the conduct of the study;

I expect that State agency studies will be coordinated through Mr. Clifton as well as through the Advisory Committee.

Establishing priorities for most effective use of limited funds is an ever-present problem and the In-Depth Study is no exception. It does, however, have an unique characteristic. That is, it will address a wide spectrum of priorities, considering such fields as environmental protection, employment patterns, public health and safety, and other factors contributing to the general quality of life on an equal or even preeminent basis with commercial development. And, of course, the study must include consideration of the Federal interest in all of these matters. Thus the study is designed to benefit the people, economy and environment of the Bay Area in the context of overall benefit to the entire country. The study has been scoped very carefully to meet the criteria established in the authorizing Resolution: the scope and details of the method of conduct have been developed as the result of careful consideration of Federal, State, regional, local and individual interests as expressed in correspondence, public meetings and personal contacts over a period of more than two years.

Finally, in regard to your quotation from the November 1970 letter of the Conservation Foundation, I understand your position and your concern. Most assuredly a large portion of the job in achieving environmental quality must be done by the States: the Corps of Engineers has no desire or intention of usurping or precluding State action in this field and I can assure that my office will coordinate its actions to take full cognizance of State and local criteria. However, I must point out that the Corps is required to consider potential environmental impact in all its plans and projects, as a matter of statute, policy and regard for the public interest. Within this context, I am sure we can work together without any Federal encroachment on State prerogatives and responsibilities.

Sincerely yours,

CHARLES R. ROBERTS
Colonel, CE
District Engineer

NORMAN B. LIVERMORE, JR.
SECRETARY

RONALD REAGAN
GOVERNOR OF
CALIFORNIA

OFFICE OF THE SECRETARY
RESOURCES BUILDING
1416 NINTH STREET
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Department of Conservation
Department of Fish and Game
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Regional Water Quality Control Boards
State Water Resources Control Board

THE RESOURCES AGENCY OF CALIFORNIA
SACRAMENTO, CALIFORNIA

FEB 2 6 1971

Colonel Charles R. Roberts
District Engineer
Department of the Army
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Your letter of January 28, 1971 addresses itself in part to the concerns of the State of California as they relate to the San Francisco Bay Area In-depth Study. It does not, however, sufficiently elaborate on your "Detailed" plan of study to provide a basis upon which the State can in good conscience concur "carte blanche" in the undertaking of the study. Nor does it remove the very real and practical limitations on participation by the State which we set forth in our letter of January 7, 1971, and summarized by saying, "The State is likewise concerned with . . .its ability to monitor and apply the State's discretion to a study of the proportions currently envisioned by the Corps . . .(requiring) a sum which is not now available for this purpose among the departments of the State Government".

Of greater discomfort, however, is the incompleteness of information which is available to the State upon which to fully judge the merits of the study's whole and elemental makeup. Sums approaching $950,000 for environmental aspects and neighboring $765,000 for social well-being aspects, resting on the descriptions contained in the detailed study design, only contribute to our concern for the ultimate content, usefulness and effectiveness of the study.

We continue to recognize potential benefits from parts of the study as now proposed. To realize these benefits, we propose that you take the following steps to refine your study design to a level that will permit

the State to more clearly identify priority areas for study and areas of marginal consequence which could be eliminated to permit fund requests for higher priority projects and investigations.

1. Identify and review all pertinent reports on San Francisco Bay and its tributary deep water ports and analyze their subject and area coverage to determine the presence of voids as they relate to the objectives of the in-depth study and the needs of the Bay and associated ports.

   We understand this has not been done and should be the logical first step.

2. Identify voids which are judged to be of high priority and shape them as elements of the in-depth study providing for the tieing together of existing and new materials.

   The resultant refined study design should be of sufficient detail to permit its ready conversion to contract work descriptions. Detail should include task items to be performed, dollar value of item, man months required to accomplish the item and the identification of the agency who will perform the task or if appropriate, whether a contractor will be used in lieu of a governmental agency.

   For your edification, a copy of the work program for the State's Master Plan of Aviation Study is enclosed as a suggested level of detail. This contract language is a direct translation of the detailed study design and although this study is being accomplished almost entirely by a contractor, item cost relationships are established and shown in "Schedule A" at the end of the task descriptions (immediately following the time schedule chart). Please note that the sum of the tasks approaches a cost of $450,000.

In the interim, while the study design is being refined, we suggest that the following investigations proceed.

1. Projection of the commodity flow inventory now being completed by the Maritime Administration of the U. S. Department of Commerce.

2. Investigation of the effect of enlarging navigation channels on salinity intrusion and any added costs of repelling ocean salinity associated with a navigation project as well as the environmental and economic effects of failure to do so.

3. Investigate the development of methods of commodity transfer which could provide a competitive alternative to increased channel depths in California's estuaries, waterways and near-shore waters.

We would agree that these three task items (spelled out in greater detail) are presently known voids which merit highest priority consideration.

As a following conclusion, we recommend that no funds for the in-depth study be requested from the Congress beyond those necessary to accomplish the literature survey and analysis, study design refinement and the three investigations noted above.

To clarify our lines of communication as discussed at the January 18, 1971, meeting with Messrs. Ford and Clifton, the Department of Navigation and Ocean Development (DNOD) is designated as the lead agency to represent and coordinate the State's interest in the study and keep the agency appraised of its progress. Mr. Clifton, as Federal Projects Coordinator, will monitor this study as he does other liaisons with the Federal Government and is available for questions regarding the interface of the in-depth study with other projects. You should feel free to contact Mr. Clifton and/or DNOD directly as you deem necessary.

Please be assured of the fullest possible cooperation from the Resources Agency.

Sincerely yours,

W. B. Livermore Jr.

Secretary for Resources

Enclosure
cc: Brigadier General Frank A. Camm

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
100 McALLISTER STREET
SAN FRANCISCO, CALIFORNIA 94102

SPNRD

9 March 1971

Mr. Norman B. Livermore, Jr., Secretary
The Resources Agency - California
P.O. Box 388
Sacramento, California 95802

Dear Mr. Livermore:

This is in response to your letter of 26 February 1971, concerning the Detailed Plan of Study for the San Francisco Bay Area In-Depth Study. Your letter suggests several steps which you feel should be taken by way of refining the study design and initiating the study. You further suggest that the next increment of federal funds requested for the In-Depth Study should be limited to amounts necessary to carry out this portion of the work.

The procedure that you have suggested we should follow corresponds rather closely to the work we are now planning for the first year of study. The level of effort proposed in the President's Budget message ($200,000 for Fiscal Year 1972) will cover specifically the items you have listed, plus small amounts for initiating the environmental and social well-being analyses. I feel that this should allow sufficient time for the State to identify more clearly those portions of the In-Depth Study which are of greatest interest to the State. It should also allow sufficient time for the State to organize internally for conduct of the desired coordination. I wish to emphasize again that our plans for conduct of the study do not envision any funding by the State of supporting studies.

The coordination channels cited on page 3 of your letter are acceptable to the San Francisco District.

Sincerely yours,

CHARLES R. ROBERTS
Colonel, CE
District Engineer

B-328d

II-C REGIONAL AGENCIES

1. CORPS OF ENGINEERS LETTER REQUESTING PARTICIPATION

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
100 McALLISTER STREET
SAN FRANCISCO, CALIFORNIA 94102

SPNED-RN

2 November 1970

Mr. Rudolph R. Platzek
Acting Planning Director
Association of Bay Area Governments
Claremont Hotel
Berkeley, California 94705

Dear Mr. Platzek:

Reference is made to your telephone conversation with Mr. Dick F. Eng of my staff relative to a proposed meeting with regional agencies in connection with the San Francisco Bay Area In-Depth Study.

This meeting is confirmed for 10:00 a.m., 17 November 1970, at the Corps of Engineers office in Sacramento, Room 5551, 650 Capitol Mall.

As you know, a Preliminary Plan of Study for the In-Depth Study was completed in March 1969. Congress concurred in the findings of the Preliminary Plan of Study and has directed the Corps of Engineers to prepare a Detailed Plan of Study for submission in March 1971. A copy of the Preliminary Plan of Study is inclosed for your information. The Detailed Plan of Study is under preparation and nearing completion.

The purpose of the meeting is to present a progress report to, and solicit views from, the regional agencies in the San Francisco Bay and Delta Region to guide the preparation of the Detailed Plan of Study.

Also attending this meeting will be representatives from the Sacramento County Planning Commission, San Joaquin County Planning Commission and the Sacramento Regional Area Planning Commission.

Sincerely yours,

1 Incl
As stated

CHARLES R ROBERTS
Colonel, CE
District Engineer

PERSONS ATTENDING
REGIONAL AGENCIES MEETING

* * * *

17 November 1970

NAME	ORGANIZATION
Margaret S. Petersen	Project Planning, Sacramento District
Henry Nakamura	Project Planning, Sacramento District
E. C. Johnson	Project Planning, Sacramento District
J. Fred Silva	ABAG, Project Review
Rudy Platzek	ABAG, Planning
Earl D. Fraser	Sacramento County
J. A. Barnes	Sacramento Regional Area Planning Commission
Lucile Wirth	San Joaquin County
J. Michael Cobb, 2Lt CE	San Francisco District, Corps of Engineers
Dick F. Eng	San Francisco District, Corps of Engineers

II-C REGIONAL AGENCIES

2. RESPONSE OF REGIONAL AGENCIES

ASSOCIATION OF BAY AREA GOVERNMENTS
HOTEL CLAREMONT, BERKELEY, CALIFORNIA 94705 • 841-9730

December 11, 1970

Colonel Charles R. Roberts
District Engineer
San Francisco District
Corps of Engineers
Department of the Army
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Subject: San Francisco Bay Area In-Depth Study

I have enclosed a copy of a staff report to the Association's Executive Committee concerning potential involvement of the Association in the In-Depth Study. This staff report will be discussed on December 17, 1970.

Prior to the Executive Committee's consideration of this report we would appreciate a meeting with you on the relationship between various study elements in the In-Depth Study with the Association's Comprehensive Regional Planning Program.

Thank you for your time and consideration.

Sincerely,

Rudolph R. Platzek

Rudolph R. Platzek
Principal Planner
In-Charge

Enclosure

ASSOCIATION OF BAY AREA GOVERNMENTS

PRELIMINARY AGENDA PREPARED ON WEDNESDAY, DECEMBER 9, 1970, FOR THURSDAY, DECEMBER 17, 1970, EXECUTIVE COMMITTEE MEETING NO. 112, 7:30 P.M., GASLIGHT ROOM, HOTEL CLAREMONT, BERKELEY

ROLL CALL

1. Approval - Executive Committee Preliminary Agenda, 12/9
2. Approval - Minutes 111, 11/19 Executive Committee
3. Minutes - Regional Airport Study, 11/20
4. Minutes - Criminal Justice Planning Special Study Committee, 11/5

GRANTS REVIEW

5.
128-70	Fremont - Open Space - HUD
129/130-70	Petaluma - Open Space - HUD
131/132-70	East Bay Regional Park District - Open Space - HUD & INT
133-70	State Dept. of Parks and Recreation - Open Space - Interior
134-70	Vallejo - TOPICS - DOT
135/140-70	Division of Highways, Dist. 04 - Highway Development - DOT

6.
141-70	Pittsburg - Urban Planning Assistance - HUD
142-70	Division of Highways, Dist. 04 - Highway Development - DOT
143-70	Solano County - Highway Development (FAS) - DOT
144-70	Valley Community Serv. Dist. - Waste Trtmt. Fac. - FWQA
145/147-70	Fringe Prkng. Fac. (PARTD, GGPD, SF) - Div. Hiwy. - DOT
148-70	Corps of Engineers - Bay In-Depth Study

7. Report 12/17 - Chairman, Planning Committee - re: Bay In-Depth Study (to be presented)

8. Solano County - Inmate Legal Assistance Program
   Santa Clara County - Criminal Justice Coordinator
   Santa Rosa - Community Relations Division

EXECUTIVE COMMITTEE

9. President - New Business
10. Report 12/17 - Finance Subcommittee - 1971-72 Budget Summary (to be presented)
11. Reports - Finance Subcommittee (to be presented)

EXECUTIVE DIRECTOR

12. Report 12/9 - February General Assembly
13. Report 12/9 - via Finance Subcommittee re: State Survey Final Report
14. Report 12/9 - Auth. Agreement Econ. Impact Analysis - Airport Study
15. Report 12/17 - Proposed Agreement - State Depository Fund (to be presented)

ADJOURNMENT TO: 7:30 p.m., THURSDAY, JANUARY 21, 1971

J. Julien Baget
Executive Director

Grant File No:	148-70
Exec. Committee:	12/17/70

ASSOCIATION OF BAY AREA GOVERNMENTS

EXECUTIVE COMMITTEE REPORT

FEDERAL DEVELOPMENT PROJECT

PROJECT IDENTIFICATION

Applicant: U.S. Army Corps of Engineers
Program: San Francisco Bay In-Depth Study
Cost: $4,500,000

PROJECT DESCRIPTION

Objective

The objective of the study is to prepare guidelines for alternative regional navigation (or transportation) plans for the future development of the San Francisco Bay Region in the context of needs for the movement of waterborne commerce, environmental enhancement, and general community well being. The product of this study will be a series of navigation development alternatives for different levels of commerce, together with their physical, financial, environmental and social implications.

Study Elements

1. Commodity Flow Study

   The principal objective will be to evaluate the potential volume and distribution of commodity flow of waterborne commerce. Projections derived from this data will provide the basis for evaluating facility requirements and various effects of alternative levels of port activity.

2. Transportation Systems Study

   The transportation systems element calls for an analysis of all navigation-related transportation systems such as highway, rail, air, and pipeline operations. In order to study regional transportation as a unified system, the physical and economic factors of existing and projected land water and air transportation systems will be studied.

3. Vessels and Port Facilities Studies

   This study area will include the analysis of all factors, existing and future, concerning vessels, navigation channels and port facilities. The capacity of navigation channels will also be considered.

4. Environmental Study

   The objective of the environmental study is to formulate environmental principles to serve as guidelines for future developments in navigation and to evaluate navigation alternatives for compatibility with these principles. Studies will be made in terms of the existing conditions, enhancement of the environment, and potential implications of regional navigation on the environment and its ultimate effect on population.

5. Social Well Being Study

This study area encompasses the well being of the people in the Bay Area and will deal with the economic and social impact of various navigation alternatives. The studies include an analysis of present and projected economic conditions in the area and the contribution that port development may be expected to make toward the alleviation of problems and the promotion of economic growth and community well being.

6. National Defense

The alternatives developed in the other study elements will be evaluated as to their impact on national defense considerations.

STAFF COMMENT AND RECOMMENDATION

In May, 1970, the Association commented on the preliminary study design of the In-Depth Study. The following comment was approved:

1. Support the "in-depth" study in general.
2. Emphasize, in particular, the need for a comprehensive Bay-Delta Model Study on oil/gas leakage and spill emergencies.
3. Urge that all transportation-oriented elements of the study be closely interrelated in the study design and coordinated with all pertinent transportation agencies in the area.
4. Offer the services of the Association in a coordinating role as a source of data inputs to the study.

The Corps of Engineers has submitted the "Detailed plan of study" for the Associations review and comment. In order to implement the above general recommendation the staff recommends that the following statement be transmitted to the U.S. Army Corps of Engineers:

Recognizing ABAG's role as the comprehensive regional planning agency in the nine county Bay Area and recognizing the comprehensive nature of the Corps of Engineers In-Depth Study, formal mechanisms should be provided for ABAG's role as the official coordinator for Bay Area participation and input in the transportation, environmental quality, and social well being elements of the study. The Corps of Engineers as well as other participating federal agencies should supply the necessary funds for the planning and coordinative function. There are broad and interrelated planning and policy implications in each of the study elements as identified. The Association has the capability as the comprehensive regional planning agency to provide both comprehensive planning and policy input.

At the meeting of the Regional Planning Committee of December 7, 1970, the committee strongly recommended the following specific courses of action to the Executive Committee.

Recommendations:

That the Association endorse the In-Depth study with the following conditions:

1. the U.S. Army Corps of Engineers contract with the Association and other regional agencies for planning and policy input into the transportation, environmental quality, and social well being study elements;
2. the association provide the coordinating and liaison mechanism for all planning and regulatory agencies in the Bay Area to provide a unified and comprehensive approach in the consideration of the alternatives for each of the program elements; and
3. the Association provide regional planning policy review for the In-Depth study.

ASSOCIATION OF BAY AREA GOVERNMENTS
HOTEL CLAREMONT, BERKELEY, CALIFORNIA 94705 • 841-9730

January 6, 1971

Colonel Charles R. Roberts
District Engineer
Department of the Army
Corps of Engineers
San Francisco District
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

Subject: San Francisco Bay In-Depth Study

The Association of Bay Area Governments, as the Metropolitan Clearinghouse for Federal Project Review in the San Francisco Bay Area, has reviewed the U.S. Army Corps of Engineers proposal for the development of a Navigation Plan for the Bay Area.

The Executive Committee reviewed the Corp's "Detailed Plan of Study" at its December 17, 1970 meeting. Recognizing the multifunctional comprehensive intergovernmental and distinctly regional planning and policy implications of the In-Depth Study and recognizing ABAG's role as the comprehensive regional planning agency in the nine county Bay Area, the Executive Committee expressed the view that the Association should actively participate in the preparation and policy review of the study.

The Executive Committee, by formal action, endorsed the initiation of the In-Depth Study with the following conditions:

1. The U.S. Army Corps of Engineers and other appropriate federal agencies involved in the study contract with the Association and other appropriate regional agencies for planning and policy input into the transportation, environmental and social well-being study elements;

2. The Association provide the coordinating and liaison mechanism for all planning and regulatory agencies in the Bay Area to provide a unified and comprehensive approach in the consideration of the alternatives for each of the program elements; and,

3. The Association provide regional planning policy review for the In-Depth Study as deemed appropriate by the Association.

The Association recognizes the importance of a broadly conceived, comprehensive, long-range regional plan for harbors and channels in the San Francisco Bay Area.

However, such development has potential impact on local and regional transportation, environmental economic and political systems of the Bay Area. The In-Depth Study recognizes the close interrelationships between the navigational system and other regional systems. The study proposes the development of alternative navigational plans interrelated with other systems which extend to the year 2040. To be properly integrated with plans for other systems, such system plans would also have to extend to the year 2040. Such planning or plans extending that far into the future does not exist. The Association, therefore, wishes to assist the Corps and other involved federal agencies in the development of such plans because of the broad and interrelated implications for the overall development and conservation of the San Francisco Bay Area.

The Association is the representative of 84 cities and 8 counties in the region and conducts an extensive regional planning program. The Association has the capability to provide comprehensive planning and policy input. We believe that the final result of an intergovernmental partnership in this study will lead to a stronger, more fully accepted, more effectively integrated regional plan for navigation in the Bay Area. Such regional involvement will also tend to eliminate some aspects of the study that are potentially duplicative of other federally sponsored regional planning activities and will strengthen overall regional planning policymaking, and the coordinative process among regional agencies and cities and counties in this metropolitan region.

Very truly yours,

J. Julien Baget
Executive Director

cc: U.S. Coast Guard
12th District
Office of the Secretary of Transportation
Fish and Wildlife Service
Department of Interior
Department of Housing and Urban Development
Office of Management and Budget
Bay Conservation and Development Commission
Metropolitan Transportation Commission

SAN JOAQUIN COUNTY
PLANNING
DEPARTMENT
1850 E. HAZELTON AVE., STOCKTON, CALIF. 95205, PHONE 944-2203, (AREA CODE 209)

November 24, 1970

Mrs. Margaret Petersen
U. S. Army Corps of Engineers
650 Capitol Mall
Sacramento, California 95814

Dear Mrs. Petersen:

Mr. Nakamura has asked me to send you a list of studies we have completed which may contribute to the indepth study of the San Francisco Bay. The following reports are available:

Workshops in Planning - The studies and statistics used as a basis for the development of the General Plan

General Plan for San Joaquin County - adopted 1963.

Revision of the General Plan - a monograph updating and extending the planning period to 1990

General Plan - see attached

Recreation Element of the General Plan - Delta Section provides a balanced system of recreation facilities for San Joaquin County

Stockton Metropolitan Area Transportation Study - Joint State Division of Highways, City of Stockton and County of San Joaquin transportation study including a public opinion survey, and Origin and Destination Study, employment data by Standard Industrial Code located in traffic zones. We are currently preparing a population study for 1985 and 1995.

Drainage Study, Phase I - will be completed by May 1

Metropolitan Stockton Sewage Disposal Plan - adopted 1967 by the City and County

San Joaquin County Sewage Disposal Plan - will be completed in March

Airport Segment of the Transportation Element of the General Plan - a current study of land use around the Stockton Airport is under way

Print-out of Census of 1970 - and all other Census Data usually sent to the Key Census Person

City of Stockton Marina - these materials are available from the City of Stockton Planning Department

Inventory of Social Services in Metropolitan Stockton - by the Center for Community Development, U.C. Davis

Directory of Social, Health and Recreation Services - by Community Council of Stockton and San Joaquin County

As the study proceeds we may have additional economic and social information if the grant for a Community Renewal Program is approved.

Very truly yours,

Lucile Wirth

(Miss) Lucile Wirth
Senior Planner

LW/sa

Enclosure

CLIFFORD C. WISDOM, CHAIRMAN
SECOND DISTRICT

CARMEN PERINO, VICE-CHAIRMAN
FIRST DISTRICT

GARY A. WILER
THIRD DISTRICT

DAN S. PARISES
FOURTH DISTRICT

FRANK L. HOYT
FIFTH DISTRICT

BOARD OF SUPERVISORS
222 EAST WEBER AVENUE, ROOM 701
STOCKTON, CALIFORNIA 95202

TELEPHONE (209) 944-2501

January 8, 1971

Colonel Charles R. Roberts
District Engineer
U. S. Army Corps of Engineers
100 McAllister Street
San Francisco, California 94102

RE: Preliminary Plan of Study, San Francisco Bay Area In-Depth Study

Dear Colonel Roberts:

The Board of Supervisors of the County of San Joaquin appreciates the opportunity provided our Planning Department to discuss and review the Preliminary Plan of Study, San Francisco Bay Area In-Depth Study, with members of the Project Planning Division of the San Francisco and Sacramento District Corps of Engineers.

We recognize this study is designed to provide much needed information on which to base future Bay Area and Delta economic development planning for expansion of the ports and for intermodal transportation involving port facilities and commodity distribution.

The extent of the proposed study, including information from Federal, State, regional and local planning and governmental agencies could not be undertaken by any other means or level of government, and much of the value of the study is this comprehensiveness.

This County is willing to provide local review as the study progresses and will provide any available information which is pertinent to this study. We are also prepared to appoint a representative as a member of the Advisory Committee to provide further local input into this study.

Very truly yours,

Clifford C. Wisdom

CLIFFORD C. WISDOM, Chairman
Board of Supervisors

CCW/sh
cc: Board Clerk
Administrator
Planning Department

COUNTY OF SACRAMENTO

PLANNING DEPARTMENT
EARL D. FRASER, PLANNING DIRECTOR

827 SEVENTH STREET
SACRAMENTO, CALIFORNIA 95814

January 7, 1970

Colonel Charles R. Roberts
District Engineer
Corps of Engineers
San Francisco District
100 McAllister Street
San Francisco, California 94102

SUBJECT: Detailed Plan of Study of San Francisco Bay Area In-Depth Study, draft dated November 1970

Dear Colonel Roberts:

We have reviewed the subject draft as a refinement and expansion of the March 1969 draft and find that it is a desirable step in the direction of covering all of the various aspects of the study of the Bay Region that we would like to have included. There are obvious additional details which we would anticipate would be covered by the study itself. We feel that it would be advantageous to Sacramento County and the responsibilities under the cognizance of the County Planning Department to have a comprehensive overall view made of the whole San Francisco Bay-related factors as proposed in the subject study. The reports which would be produced by such a region-wide study would be advantageous to us in detailing the General Plan of Sacramento County.

Sincerely,

Earl D. Fraser

EARL D. FRASER
Planning Director

EDF: sz

cc: Corps of Engineers
(Sacramento office)

Sacramento Regional Area Planning Commission

SUITE 622 926 J BLDG. SACRAMENTO, CALIFORNIA 95814 Ph. 443-6805

January 25, 1971

Col. Charles R. Roberts
District Engineer
Department of the Army
Corps of Engineers
San Francisco District
100 McAllister Street
San Francisco, California 94102

Re: San Francisco Bay
In-Depth Study

Dear Col. Roberts:

You have requested comments from this agency on the Detailed Plan of Study of the San Francisco Bay Area In-Depth Study. My comments are based on an incomplete draft dated November, 1970 and provided at a meeting here in Sacramento on November 17, 1970. I have discussed the study with Melvin Shore of the Port of Sacramento, with representatives of ABAG, and with Samuel Weinstein of HUD.

My comments on the study should be prefaced by two observations: 1) The need for a long range planning study focusing on navigation and waterbourne commerce in the Bay area appears to be needed; and, 2) The Sacramento region is peripheral both geographically and economically to the Bay area focus of the study.

My overall reaction is to seriously question the advisability of such a broad study conducted almost exclusively by federal agencies when the product is to be "... a series of navigation development alternatives... together with their physical, financial, environmental and social implications." My recommendation would be to substantially restructure the study in one of two ways: 1) To narrow the Corps of Engineers study focus to deal exclusively with navigation and waterbourne commerce, to portray the alternative systems and to rely on State and Regional planning agencies to

analyze the physical, financial, environmental and social implications, or 2) same as (1) except that federal funds are provided through the Corps to State and Regional Agencies to analyze the implication.

My overall reaction is based on the knowledge that many soundly conceived regional studies already exist and on a predjudice that favors joint federal-state-local planning efforts.

I have not had as yet an opportunity to review the study with the Commission or its Technical Coordinating Committee. This will be done in February and I will forward any further comments to you. If a more recent draft report is available, I would appreciate receiving a copy.

Sincerely yours,

James A. Barnes
Executive Director

JAB/rr

cc: Margaret S. Peterson
Melvin Shore
John Baget, ABAG
Samuel Weinstein, HUD
Earl Fraser, Sacramento County

II-D LOCAL REVIEW AND ADVISORY GROUP

1. CORPS OF ENGINEERS LETTER REQUESTING PARTICIPATION

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
100 McALLISTER STREET
SAN FRANCISCO, CALIFORNIA 94102

SPNPA 5 October 1970

Mr. Dan J. Daggett
Assistant Manager of
Industrial Development
Southern Pacific Railroad
65 Market Street
San Francisco, Ca 94105

Dear Dan:

Since you accepted our invitation to become one of the Review and Advisory Group on the detailed Plan of Survey for the Navigation In-Depth Study, we have developed a more definite schedule. Today (5 October), we are meeting with other Government Agencies which will be charged with compiling and evaluating about one-half of the information needed for the investigation.

We now would like to meet with you and your fellow members of the Group in order to go over what we are doing, how we hope you will help us, and the timing for publication of the detailed Plan of Survey. We would like to set up this meeting during the week beginning 19 October.

Following this initial briefing, we hope to have a draft proposal for your advice and review sometime in November. Your comments would be incorporated in a final statement on 4 December. This final plan, before forwarding, would have appended the further comments of each of the Advisory and Review Group, incorporating the comments and opinions, both pro and con, of the segments of local interest you represent.

We will schedule the meeting tentatively for 0930, 19 October, in this office. If you have a conflict, please call us and we will try to arrange a more convenient time.

SPNPA 5 October 1970
Mr. Dan J. Daggett

Letters similar to this have been sent to Messers. Bob Langner, Marine Exchange; Ron Henrekin, Solano County Industrial Development Agency; George Dixon, Phillips Petroleum; and Mike McCloskey, Sierra Club.

Sincerely yours,

1 Incl
Prelim Plan
of Survey

CHARLES R. ROBERTS
Colonel, CE
District Engineer

Mailing List for letter of 5 October 1970:

Mr. F. R. Henrekin
Executive Director
Solano County Industrial
Development Agency
City Hall
Fairfield, CA 94533

Mr. Mike McCloskey
Chief of Staff and
Conservation Director
Sierra Club
220 Bush Street
San Francisco, CA 94104

Mr. Dan J. Daggett
Assistant Manager of
Industrial Development
Southern Pacific Railroad
65 Market Street
San Francisco, CA 94105

Mr. Robert H. Langner
Executive Secretary
Marine Exchange, Inc.
World Trade Club, Rm 303
Ferry Building
San Francisco, CA 94111

Mr. George Dixon
Consultant
Phillips Petroleum Company
Avon Refinery, Marine Oprns
Supply & Trans Dept
P. O. Box 888
Martinez, CA 94554

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
100 McALLISTER STREET
SAN FRANCISCO, CALIFORNIA 94102

SPNED-RN

7 December 1970

Mr. Ben E. Nutter
Executive Director
Port of Oakland
66 Jack London Square
Oakland, California 94607

Dear Mr. Nutter:

Reference is made to our previous correspondence and meeting relative to the San Francisco Bay Area In-Depth Study. As you may know, Congress concurred in the findings of the Preliminary Plan of Study submitted in March 1969, and has directed the Corps of Engineers to prepare a Detailed Plan of Study by March 1971.

The results of three public hearings held in June 1970 and further analysis of the investigation areas contemplated for the In-Depth Study have indicated the requirement for substantial changes from the concepts concluded in the Preliminary Plan of Study of March 1969.

To keep all interested groups current with the study, we are holding a series of meetings with Federal, State, regional and local agencies to report on the progress of the Detailed Plan of Study.

It would be greatly appreciated if you could attend a meeting in my office at 1:30 p.m. on 16 December 1970. A list of those invited to this meeting is inclosed (Inclosure 1).

Also inclosed for your information are draft materials for the Detailed Plan of Study that will be discussed at this meeting (Inclosure 2). It is hoped the inclosed materials will enhance the productivity of our meeting.

Sincerely yours,

2 Incl
As stated

CHARLES R. ROBERTS
Colonel, CE
District Engineer

Mailing list for letter of December 7, 1970:

Miss Miriam E. Wolff
Director
Port of San Francisco
Ferry Building
San Francisco, California 94106

Mr. Howard A. Harris
Director
Port of Redwood City
775 Harbor Boulevard
Redwood City, California 94063

Mr. George T. Hench
Director
Port of Stockton
P. O. Box 2089
Stockton, California 95202

Mr. Ben E. Nutter
Executive Director
Port of Oakland
66 Jack London Square
Oakland, California 94607

Mr. Mel Shore
Director
Port of Sacramento
P. O. Box 815
West Sacramento, California 95691

Mr. Dale R. Stringfellow
President
Benicia Industries, Inc.
P. O. Box 315
Benicia, California 94510

Mr. Thomas R. Eddy
Port Development Coordinator
Port of Richmond
City Hall
Richmond, California 94804

II-D LOCAL REVIEW AND ADVISORY GROUP

2. RESPONSE OF LOCAL GROUP

CALIFORNIA
Marine Affairs Conference
ORGANIZED 1956

WORLD TRADE CENTER, ROOM 303
SAN FRANCISCO, CALIFORNIA 94111
TELEPHONE (415) 982-7788

December 4, 1970

Col. Charles R. Roberts
U.S. Army Corps of Engineers
San Francisco District
100 McAllister Street
San Francisco, CA 94102

Dear Charles:

I refer to your 10 November and earlier correspondence, and to your 19 October meeting, regarding the Detailed Plan of Study of the San Francisco Bay "In Depth" Study.

As original sponsors - indeed, authorization drafters - of this unique endeavor, we find it increasingly difficult to assume responsibilities of even an advisory nature which involve technical, professional, engineering and other disciplines. For even to comment knowledgeably on your Plan of Study requires staff, competence, time and resources beyond our present capabilities.

I nevertheless continue in my conviction that much (or most) of the original authorization and explanation remain valid, and increasingly applicable and essential to both the region and nation.

Further, the frustrations which the Corps of Engineers has experienced in attempting to mount this unusual investigation (hopefully, as a regional prototype for eventual national application) is matched by the difficulties we have encountered - in both national and regional opposition, either specific or general - critical of some portions of the concept.

To continue to carry responsibility in seeking annual funding of the investigation, we need a plan which allows both maximum latitude by the Corps as the study evolves, and one which is sufficiently understandable as to be acceptable to Congressional Committees and staffs.

The first attempt was close to the original concept of the authorization, but too "far out" perhaps to be totally "salable".

I am concerned that the present draft may be in part too restrictive to meet fully our needs of a few years hence, or therefore capable of providing the guidance we will require

to plan to accommodate our (and the nation's) soaring waterborne commerce requirements of the coming decades.

Abstracting from the study issues (understandably controversial) such as trade promotion, traffic solicitation and advertising are not particularly significant - and such omissions will be responsive to some ports' criticism given at your Public Hearings.

But diverting emphasis even in part to the more proven and hence less demanding elements of the undertaking - such as channel dimensions and future super tankers needs - would not be fully responsive to the imperatives of the undertaking.

It is regretted that our present capabilities and resources as an organization are too restricted to permit adequate anaylsis and comments on all of the elements of your draft - perhaps more understandable in the light of the time limitations you necessarilly imposed. In a year to two, as our present plans for expansion and membership growth prove successful, we would be better prepared to advise and assist.

Meanwhile, I personally comment only on one (which I consider a key) element of your Plan.

On page 14 of the Transportation Systems Study, item C reads,

> C. "AN ECONOMIC FACTOR ANAYSIS ASSOCIATED WITH THE MOST EFFICIENT UNIFIED TRANSPORTATION SYSTEMS FOR THE TOTAL SAN FRANCISCO BAY REGION THAT ACCOMPLISHES SPECIFIED ENVIRONMENTAL AND SOCIAL WELL-BEING OBJECTIVES."

First, there undoubtedly will be occasions of conflict between environmental and social well-being objectives, especially when the latter is predicated on relatively full employment as an objective. This would presuppose economic growth, in turn requiring industrial and other expansion. It is therefore necessary to define the "specified environmental and social well-being objectives" <u>before</u> an analysis as contained in item C can be made.

This paragraph goes to the heart of the matter, for in my estimate, it is the basis for mounting the "In-Depth" Study - not only reconciliation between growth and the environment, but also, definition of the role of waterborne commerce as the factor in each of these basic considerations of life in the Bay Region.

This, I believe, first requires analysis of the <u>present</u> role of our waterborne commerce here in our economy, and its impact on the environment and social well-being. Parenthetically, the need for such an "impact study" - always a major element of the In-Depth Investigation - is now greater than ever. Both the onslaught on shipping and port development by all-out conservationists, and the political efforts to swing national policy back towards trade protectionism, need the fullest rational response.

Only when this role is defined and understood will adequate planning be possible, as proposed in item C.

The environmental aspects appear susceptible to inventory and analysis. Indeed, much of the job is already accomplished or has been launched. The results of the analysis should list at least four categories of environmental assets:

(1) Those essential for the preservation of the health of our residents;
(2) Those which are considered highly desirable for retention and preservation - but not essential;
(3) Those desirable, but which can be eliminated without major degradation of the environment, and
(4) Undesirable elements which should be improved or eliminated.

An element of social well-being - previously mentioned - is full employment, based on a sound economy. One means to control and direct economic expansion is provision of those elements necessary for this growth. I believe one of the most important of these elements - if not frequently the overriding factor - is efficient transportation. I further believe, however, that it is wasteful, inefficient and harmful to attempt to control growth by limiting development of shipping services best able to serve the expected growth.

This growth should not be considered inevitable. There are factors already in existence or pending which do limit - and will so increasingly - such growth. The BCDC is of course only one example.

One of the functions of this study should be to evaluate the validity - and effectiveness - of such controls and limitations, and to recommend measures as will lead to the optimum balance of population, the economy and the environment. This could mean that the study should envision a completely planned development of our region - as one extreme, already espoused by some - and at the opposite end, continuing with relatively independent and unilateral development by the individual elements of our port and shipping complex.

In other words, there must be some degree of overall planning, some agreement on overall objectives, before the study's results can contribute to realization of these goals.

The internal priorities of the study therefore should be established most carefully. To reiterate - and as probably already contained in your plan, but perhaps not spelled out in summary - the order I believe should be:

A - Study of the role and impact of our present waterborne commerce, port complex and related transportation on the environment and social well-being here.
B - Establishment of goals - objectives on which substantial agreement can be achieved.
C - Presentation of alternative methods of achieving these goals; evaluation of each, and extent of Federal, state and local

interest - for the long overdue "public dialogue".

Of these three sequential steps, "B" is by far the most sensitive, unique and difficult of accomplishment. This will burden the Corps of Engineers as has no other study in its history (and already has!). However, its successful completion will spell out the final merit of the overall study.

Beyond completion and acceptance of the Detailed Plan of Study, it is in this area of investigation that local organizations similar to your present Review and Advisory Board can best serve and assist in the study.

I repeat, however, that step A is the action which must be first undertaken, if only for creditability. This means that each public and private marine facility must be contacted for all possible imput, as well as utilization of the (rather meagre, to my knowledge) existing research and methodology on commerce impact.

We must for example know how many people derive what portion of their economic existence due to our harbor, shipping and its associated activities. This analysis must extend not only to its primary and secondary impact, but even to tertiary effects on those who provide goods and services to the region at large. We can offer some assistance in these efforts - in part, by noting the gaps in available data.

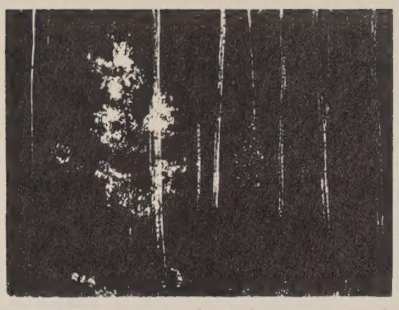
In conclusion, I repeat our obvious interest in this unique study, the Conference's determination that an undertaking which it has espoused for almost eight years go forward, and that our support and assistance remain available to its realization.

Sincerely,

Bob Langner

Robert H. Langner
Executive Secretary

mjk



by Ansel Adams in *This Is the American Earth*

SIERRA CLUB Mills Tower, San Francisco 94104

3 December 1970

Colonel C. R. Roberts
Army Corps of Engineers
100 McAllister St.
San Francisco, CA 94102

Dear Colonel Roberts,

We have reviewed the study items for the Detailed Plan of Study of the San Francisco Bay Area In-Depth Study as obtained from you at the 19 Oct. meeting and inclosed in your letter of 10 Nov. We would like to add the following comments to those made earlier in our letter of 29 June:

1) We still feel a basic apprehension over the purpose of the Study if it is to supply a master plan for massive development of the Bay-Delta estuarine system for heavy industry.
2) We feel that portions of the Detailed Plan are simplistic in suggesting that restraints of law might not be in the public interest, that public well-being might be equated solely to pay rolls, and that environmental values might be mitigated apart from their relation to public good.
3) We are heartened immensely by the scope of the study item on the environment and hope sincerely it will prove to add more than window dressing for the Plan.
4) We hope that our looked-forward-to continuing participation in the Study by the Club will not be construed by the Corps or in their correspondence and releases as implying an endorsement by the Sierra Club.

In conclusion, let us thank you again for inviting us to serve on the In-Depth Review and Advisory Group. Please keep Mr. Michael McCloskey informed as to progress in general and future meetings in particular.

Sincerely yours,

P. H. Zars

PETER H. ZARS

Southern Pacific
Land Company

One Market Street • San Francisco, California 94105 • (415) 362-1212

INDUSTRIAL DEVELOPMENT

D. T. DAGGETT
MANAGER OF INDUSTRIAL DEVELOPMENT
D. S. GIBSON
ASST. MANAGER OF INDUSTRIAL DEVELOPMENT
P. ANACABE
R. N. ARRINGTON
V. M. RICHARDSON
ASSISTANTS TO MANAGER
OF INDUSTRIAL DEVELOPMENT
C. W. HILLQUIST
SPECIAL REPRESENTATIVE

IN REPLY PLEASE REFER TO

GI-12145

November 11, 1970

Mr. Dick F. Eng
U. S. Army Engineer District
Corps of Engineers
100 McAllister Street
San Francisco, California

Dear Mr. Eng:

I appreciated the opportunity to meet with you and Mr. Voss on November 6 to discuss the Corps of Engineers "In Depth" study for the San Francisco Bay Area. As I have indicated before, I believe this study will be of great value in planning for the future growth of the San Francisco Bay Area.

In response to your inquiry as to what information Southern Pacific might make available when the actual study is undertaken, I have made a preliminary check with other departments of our company and have verified that our firm will be glad to cooperate to the extent possible in providing needed data. Presumably, our company will have the greatest opportunity to make a contribution with respect to transportation facilities. In that regard, there is data which we accumulated for our own use regarding present and expected future traffic volumes.

Our representatives also will be able to furnish maps showing existing railroad and pipeline facilities. We also will be glad to consult with the study representatives concerning technological improvements that might be expected in our railroad, pipeline and intermodal operations.

We suggest that those individuals who will be responsible for making the transportation study should carefully plan their program so that we will have a clear understanding of precisely what data is needed from the several railroad companies. They also should bear in mind that none of the railroads will be willing to furnish details on commodities, origins and destinations which would provide confidential information detrimental to the competitive interests of the individual railroads. Presumably, gross figures covering general movements will be satisfactory for the transportation study.

It would be my suggestion that when the transportation study is undertaken that a representative of your office as well as the department responsible for making the transportation study call a meeting of representatives of the several railroads. At such a meeting a detailed description of the study can be provided, similar to the briefing which

Mr. Dick F. Eng

November 11, 1970
GI-12145

you and Mr. Voss gave Mr. Henrekin and me last week. You probably recognize that it will be advisable in such an explanation of the study to explain the benefits that might be derived, not only from the standpoint of general public welfare but also from the standpoint of individual companies. Similar meetings, of course, should be arranged with those companies involved in trucking, airline operations and pipeline business. It is my thought that the problems of different transportation agencies are such that separate meetings with railroad, truck lines, etc. would be more productive.

It is my belief that the other railroads and other transportation companies will share Southern Pacific's willingness to provide reasonable cooperation and assistance in making this "In Depth" study.

Incidentally, in checking with other people in our company, I have learned that the Department of Transportation within the last four to six weeks has approached some of our offices with a lengthy "shopping list" of items on which they want information from us related to a transportation study of the Bay Area. I have not been able as yet to obtain the name of the individual who made this inquiry. The man to whom he talked in our company was familiar with the plans for the "In Depth" study and it was his impression that the Department of Transportation program was not as well organized as the Corps of Engineers "In Depth" study. In fact, it was not clear what purpose would be served by the Department of Transportation study. I suggest that you check with Department of Transportation officials to determine further details on their study, to make sure that there is not an unnecessary overlap in the research activities of two separate government programs.

If I can be of further assistance in connection with plans for the "In Depth" study, please let me know.

Sincerely yours,

D A Daggett

PHILLIPS PETROLEUM COMPANY
SAN MATEO, CALIFORNIA 94402
66 BOVET ROAD

SALES DEPARTMENT

November 23, 1970

Charles R. Roberts
Colonel, CE
District Engineer
Department of the Army
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel:

With reference to your letter of November 10, 1970, with the transportation systems study and environmental study enclosures:

These enclosures each cover several very important subjects. We certainly appreciate the work and effort put into preparing this material by you and your staff. There are two subjects referred to that I am somewhat familiar with -- airports and the tanker operations, as they each refer to the transportation systems. May I suggest at this time we have several meetings where the Advisory Group can openly discuss each one of these subjects. I am sure your Citizens Advisory Council will have suggestions and constructive information on each one of the several subjects referred to in the enclosures. I refer to the air transportation for the reason I was on leave from, then, Tidewater Oil Company, now Phillips Petroleum Company, for about five years as Manager and Chief Engineer of the San Francisco International Airport working with our Engineering Staff preparing the master plan for this facility.

Being a Navy man and in the petroleum industry, I have a background in tanker operations. If it becomes difficult to have a meeting with the five members of the Advisory Council, you may desire to meet with us individually. If you desire to meet with me on the subjects referred to please let me know and we can set up an appointment mutually agreeable with those concerned.

Sincerely,

G.M. DIXON

GMD:JH

707 • 425-8023

SOLANO COUNTY INDUSTRIAL DEVELOPMENT AGENCY
COURT HOUSE [redacted] - FAIRFIELD, CALIFORNIA 94533

December 1, 1970

Mr. Dick F. Eng
U. S. Army Engineer District
Corps of Engineers
100 McAllister Street
San Francisco, CA

Dear Mr. Eng:

The briefing given Dan Daggett and myself by Mr. Voss and yourself was very helpful in understanding my responsibility in connection with the "In Depth" Study. I believe that I can be of assistance by arranging the cooperation of those engaged in economic development in the Bay Area.

I would suggest that when you have had the opportunity, with the cooperation of other government departments, to outline the information needed, that I arrange a meeting of the representatives of the Industrial Departments of the railroads, PG&E, Industrial Realtors, the banks, major developers and industrial development executives representing the other Bay Area Counties. At that time you can brief them on the study and the data you are seeking. I believe that we can also make use of the Economic Development Subcommittee of the Bay Area Council, of which Dan Daggett is chairman and I serve as a committee member.

I believe that these groups can supply the data you are seeking, and, further, that they will make suggestions as to the information that will be the most useful in planning the future of the Bay Area. I have discussed the study with a number of these persons and they are both enthusiastic about the program and anxious to assist. Any economic information available will be furnished once it is determined what data you are seeking.

I mentioned an article I recently prepared on the necessity for the environmentalists and we who seek economic development to cooperate. I am enclosing a copy.

Mr. Eng
12/1/70

Please call me at any time that I can assist.

Sincerely yours,

F. R. HENREKIN, Executive Director

FRH/nkn
enc.
cc: Dan Daggett
Angelo Siracusa

PORT OF OAKLAND

February 10, 1971

Col. Charles R. Roberts
District Engineer
U. S. Army Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Col. Roberts:

I have reviewed your Detailed Plan of Study on the San Francisco Bay Area In-Depth Study dated January 8, 1971 and I would be pleased to recommend endorsement, in principle, of the study to our Board of Port Commissioners.

We wish to reaffirm the position of the Port of Oakland as outlined in my letter to you on July 7, 1970. It is noted that the subject of navigation channels in the Bay Area is elaborated upon in the Detailed Plan although it is still, in fact, overshadowed by the other elements of the referenced plan. Any study pertaining to navigational needs should not cause deferment of urgently needed projects in the interim period. The final report of this study, we note, is scheduled for completion in 1976. The effect of a possible five-year moratorium on navigational planning and development in the Bay would be extremely damaging to the Bay Area economy.

The Port of Oakland, as you know, is the only agency in the Bay Area which maintains both marine and airport facilities. We note that the Detailed Plan has expanded its scope to include the study of air transportation and more specifically air cargo. This subject has been thoroughly investigated by other groups including the Federal Aviation Administration, the Bay Area Study of Aviation Requirements (BASAR), and the State of California Department of Aeronautics. Any aviation studies to be undertaken as part of the In-Depth Study should be carefully coordinated with these other agencies to prevent duplication of efforts.

As always, please be assured of the Port of Oakland's cooperation in the In-Depth Study.

Sincerely,

Ben E. Nutter

Ben E. Nutter
Executive Director

nk

B-358

66 Jack London Square • P.O. Box 2064 • Oakland, California, 94607 • Phone (415) 444-3188
Cable Address PORTOFOAK, Oakland • Telex 336-334

PORT OF SACRAMENTO

SACRAMENTO-YOLO PORT DISTRICT
P. O. BOX 815 • WEST SACRAMENTO,
CALIFORNIA 95691 • PHONE (916) 371-8000

File: Yours SPNED -RN
Ours 5037

December 29, 1970

Colonel Charles R. Roberts, District Engineer
San Francisco District Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

I refer to the Preliminary Plan of Study for the San Francisco Bay Area In-Depth Study transmitted with your letter of December 7, 1970. At the outset, let me congratulate you and your staff on the considerable improvement in your approach to the projected study. I regret, of course, that this cannot be construed as an endorsement of the referenced plan. You have solicited our comments on the plan. They are as follows:

CONGRESSIONAL INTENT

It is our understanding that Congress has frequently expressed their concern with the requirement for deeper channels to accommodate the growing size of the world's merchant marine. They have recognized that they could not be expected to endlessly deepen the navigation channels of this country. It is our understanding that it is this concern that motivated the original authorization for this study. Admittedly, the language was very general as it usually is in cases of this type. Nevertheless, it is necessary to recognize the legislative intent in such matters. I submit that the proposed plan of study goes far beyond such legislative intent.

ECOLOGY AND SOCIAL WELL-BEING

Your introductory remarks indicate that "there was a favorable and widespread interest in the study" (see page 7). Perhaps the best gauge of this interest was the public hearings you conducted. Those concerned with the ecology and social well-being certainly dominated the hearings on the favorable side. We all recognize, I believe, the need to strike a balance between the needs of navigation and the demands of those concerned only with the ecology. You are to be commended for aiming to weigh these needs in your study. Clearly there has been ample legislative intent demonstrated in this regard.

PORT OF SACRAMENTO

Colonel Roberts December 29, 1970

OBJECTIVE

Your stated objectives cover several pages. Yet from the legislative intent, as we understand it, the objective can be tersely stated as the needs for deeper channels and their interrelation with the ecology. There is no justification for expanding the study into a study of world-wide commodity movements, the needs of air transportation, legal impediments to expanding truck transportation, etc., etc., etc. Most seriously, there is no justification for the federal government or one of its agencies attempting to master-plan an area that is a mixture of several economic units.

COMMODITY FLOW STUDY

The proposed commodity flow study element seems to be completely purposeless. Numerous assumptions would have to be made in such a study, any one of which being in error can seriously distort the results. Some examples were cited at the meeting in your office, viz., phosphate rock movement from the east coast, canned goods to the east coast, trade with Red China, etc.

Even if it were possible to accurately predict the flow of commodities, what purpose could this information serve in the balance of the study. Alternative methodologies could accomplish the desired results, e.g., assumptions being made at the level of channel depths rather than commodity flow. The contribution of the commodity flow study to the social well-being element is speculative at best.

ENVELOPE IDEA

We understand that there will be no allocation of cargo to individual ports but that rather there will be an "envelope approach" to the volumes applicable to each port. Since you will be studying the entire bay as a system, we fail to understand how the envelope approach is feasible. We further fail to understand the application of studies of individual ports and their facilities.

SCOPE

As long as the study revolves around channel depths, the inclusion of Sacramento and Stockton was understandable. It should be made perfectly clear that Sacramento (and presumably Stockton as well) is not part of the bay area economic area. This is attested to in that it has its own Regional Area Planning Commission and is not part of the Association of Bay Area Governments or other planning groups. Sacramento is outside of the jurisdiction of

PORT OF SACRAMENTO

Colonel Roberts December 29, 1970

the Bay Conservation and Development Commission. These along with other obvious examples indicate that Sacramento is not part of the economic planning unit of the bay area. We seriously object to any attempt to include Sacramento in your study for purposes beyond channel depths.

There has been a suggestion that the referenced study is needed because there is no overall planning group to deal with. Indeed there are,at least to the extent that the local people find it necessary. There is no justification for the superimposing of an outside planning agency in the many areas alluded to in the Preliminary Plan of Study.

In this general regard, we take it as a commitment of your office that there will be no recommendations concerning modification to legal entities as a result of your study.

As in the past, we remain committed to assist you in any way that we can. We hope that we can concur in your findings. However, we reserve the right to dissent. The likelihood of a dissent seems probable, since we have grave concern with regard to the methodology. The attempt to "study" all of the phases of our economy, ecology, etc., that are touched upon by navigation can only lead to conclusions that will be based upon a miriad of assumptions with all the human frailities that are attendant thereto. We hope that the study can be reduced to a comprehendable level and to a practical cost.

Sincerely,

Melvin Shore

Melvin Shore
Port Director & Chief Engineer

MS/mmg

PORT OF
FERRY BUILDING

CITY OF SAN FRANCISCO • JOSEPH L. ALIOTO, MAYOR
SAN FRANCISCO
SAN FRANCISCO, CALIFORNIA 94111 • TEL.: (415) 391-8000

January 8, 1971

Colonel Charles R. Roberts
Department of the Army
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102.

Dear Colonel Roberts:

Re: San Francisco Bay Area
In-Depth Study

You have requested our comments on this subject.

The Port of San Francisco is always interested in obtaining facts and analyzing them, and the more data that is gathered the better the basis for making decisions. Therefore, we want to cooperate with the Corps of Engineers on this study and will assign competent staff to work on the various phases of this proposed study.

At the outset we stress that competitive factors must be recognized as a way of life in the United States and this fact must be kept in mind in the evaluation of the data gathered, in the finalizing of conclusions, and the making of recommendations. For this reason and because of the complex nature of inter-discipline phase of the fact gathering and analysis we urge the Corps to insure that Port personnel will be welcome to participate in the various discipline facets.

Also, we feel strongly that the maritime industry must have a more prominent role than that contained in the initial material. Both ports and the maritime industry are the catalysts in world trade and, therefore, they should have a stronger voice than now anticipated.

In order to achieve the maximum benefits from this study, mutual cooperation and resultant mutual understanding is required to make sure that all pertinent data is gathered

and understood and to avoid unnecessary wasteful duplication of effort. One important aspect of this is to fully understand the role of the ports in the economy.

The primary objective of this study is to help the Corps carry out its responsibility for navigation, yet the navigational forces are far outweighed and submerged by the imposition of the participation of other disciplines. Before the study is under way this imbalance should be corrected.

To save time and insure full data gathering, existing studies and data should be first collected so that a determination can be made as to what still must be gathered. This will save time and money and will permit more time and energy to be expended on the gathering of the raw data.

The true effect of dredging and spoils disposal on the economics of the ports and the area must be considered in evaluating the social and ecological consequences. As is well known, there is natural siltation of the Bay which must be overcome to maintain harbor facilities in an adequate manner for them to serve waterborne trade.

All known and available factors affecting commodity flow must be gathered and must be objectively analyzed. There are natural and artificial factors affecting commodity flow through various gateways and these must be known and understood in finalizing the report. Also, these factors should be clearly spelled out so that those using and relying on the report will know what these factors are. Because of the nature of waterborne trade and its importance to the regional economy any findings in this area of study must allow for flexibility.

The factors affecting cargo flow must be known and understood and their inter-relationships must be recognized for the final report to be of value. The ports and industry can be of great benefit in this portion of the report - although ports may disagree with one another on the conclusions reached.

We frankly fear that this study may deteriorate into a port allocation study. If the study is undertaken, precautions should be instituted and the framers should be zealous in avoiding this result. Port allocation, and the study of it, is not

the role of the Corps of Engineers, especially in a free enterprise competitive society. We strongly believe in an enlightened self-interest approach as this provides the truest test of economic viability. We trust that the Corps will not permit this potential allocation idea to develop.

We at the Port of San Francisco are aware that Red China may some day become a trading partner of the United States. Also, southeast Asia will come on line as a large trading partner when hostilities cease. These factors should be included in the study.

Ports and the maritime industry should be afforded a more active role in this study and the Corps of Engineers should work very closely with the staffs of the ports and maritime industry as well as with other governmental agencies.

We urgently request that the Port of San Francisco be named as a member of the Advisory Committee.

You may count on our participation.

Yours very truly,

SAN FRANCISCO PORT COMMISSION

Miriam E. Wolff

MIRIAM E. WOLFF
Port Director

MEW:nj
cc: E. L. Sembler
J. Monroe Sullivan

BENICIA INDUSTRIES INC.
P.O. BOX 315, BENICIA, CALIFORNIA 94510 TELEPHONE 707 745 2394

January 8, 1971

Colonel Charles R. Roberts
District Engineer
San Francisco District,
U. S. Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

We were pleased to have the opportunity to join in your review of the Detailed Plan of Study on the San Francisco Bay Area In-Depth Study.

We wish to go on record that we fully support the Corps' Plan of Study and offer our full cooperation in its execution. Previously, we have advised your office of private engineering and economic studies that have been prepared for us that are available for your use. Additionally, be assured we will assist this study in every way we can.

We're glad that the need for the In-Depth Study has been recognized by Congress. We now hope Congress will realize how critical it is that it be implemented immediately. The Bay Area, and indeed the State, need for use now the guidelines that will result from this study. Obviously then, no further time should be lost in getting it underway.

Let us know what we can do to help.

Very truly yours,

BENICIA INDUSTRIES, INC.

Dale Stringfellow
President

BENICIA PORT TERMINAL COMPANY

George B. Plant
President

DS/vcd

OFFICE OF

THE DIRECTOR OF THE PORT

STOCKTON, CALIFORNIA

January 8, 1971

Colonel Charles R. Roberts, District Engineer
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Roberts:

File: SPNED-RN
Dec. 7, 1970

This letter refers to above file and the meeting of 16 December 1970 on further discussion of preliminary findings on San Francisco Bay Area In-Depth Study.

I appreciate the opportunity to comment and first agree with some of the guidelines indicated on Pages 8 and 9 of the draft dated November 1970. Specifically, I believe the guidelines that should predominate are Number 1, 2, 5 and 6, on Pages 8 and 9.

The study of commodity flow is at its best only a hazardous speculation that will change violently as economic conditions of trade are influenced in the international arena and, therefore, are of little value.

Stockton is not within the jurisdiction of BCDC or ABAG and other Bay Area development groups and has never been considered an integral part of their economic region. I believe the study should not attempt to enhance the amalgamation of legal entities as they now exist. This should rather be an effort of the areas involved with the State rather than a Federal sponsorship.

If there is concern as a result of the study on the harmfulness of liquid bulk carriers (petroleum or chemical) or offensive dry bulk carriers and transfer points, then it would require alternate methods of handling to and from the Bay Area region as well as the two inland ports in the Sacramento District of Corps of Engineers that would prevent any disruption to the community.

PORT OF STOCKTON

TO Colonel Charles R. Roberts DATE January 8, 1971

I believe the study is commendable in its approach as far as ecology, deepening and dredging is concerned and agree that the main effort should include in the study the maintaining and upgrading of present channels, the deepening to accommodate future liquid and dry bulk carriers and multi-purpose dry cargo ships within practical size limitations.

The effects of super-jumbo carriers beyong the 35 to 50 feet requirements in the Bay Area and tributaries should be studied for present facilities or alternate off shore facilities.

We stand ready to assist in any practical way you may require.

Very truly yours,

C. W. Phelps
Director

CITY HALL
RICHMOND, CALIFORNIA

City of Richmond
CALIFORNIA

TELEPHONE: 232-1212
ZIP NO. 94804

January 13, 1971

Colonel Charles R. Roberts, CE
Department of the Army
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California #94102

Dear Colonel Roberts:

As a result of your briefing on and our study of the Draft Plan for the San Francisco Bay In-Depth Study, I would like to comment for the Port of Richmond.

In view of the increasing concern in the Bay Area over the proper use of the Bay and its orderly development, we think the In-Depth Study is very timely. There is no doubt that further development is necessary for economic growth, yet the Bay must be preserved both ecologically and aesthetically. Further uncontrolled growth could be economically infeasible and could have drastic effects on the Bay as a natural resource. Therefore, we believe the In-Depth Study is a good method to bring together all of the diverse factors affecting the Bay so that planners can have a yardstick against which to measure future development.

We, in Richmond, feel that our own efforts cannot be unilateral, but must be in consonance with the efforts in the rest of the Bay and Delta. Since your organization can provide an unbiased overall survey of the many diverse aspects of the Bay and Delta complex, we are in accord with both the concept and scope of the In-Depth Study.

Very truly yours,

Thomas R. Eddy

Thomas R. Eddy,
Port Director

TRD:ms